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1984 POPULATION TRENDS FOR WASHINGTON STATE

OFM
OFFICE OF FINANCIAL MANAGEMENT

John Spellman, Governor
Joe Taller, Director

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PREFACE

Population Trends provides current demographic data for cities, towns, and counties in Washington State.

The April 1, 1984, population estimates in Table 1 represent a tremendous amount of effort by the Policy Analysis and Forecasting Division staff and local government personnel. These estimates are truly a cooperative effort. Their high quality throughout the decade is maintained by the excellent housing and special census data and other information provided by local jurisdictions.

The 1984 city and town estimates will be used in the allocation of state revenues beginning January 1985 (RCW 43.62.030). The 1984 estimates of unincorporated area populations will be used to allocate state liquor sales profits to counties beginning September 1984 (RCW 66.08.200) and liquor excise tax revenue beginning October 1984 (RCW 82.08.170).

1983 estimates of Washington's population by racial categories and of the Spanish Origin population are included in this year's publication. Racial/ethnic estimates are published on a one year lag basis because they require data that are not available until fall. 1984 racial estimates will be available in November.

The Special Reports Section contains several articles of interest, including profiles of Washington's Spanish and military populations. Steve Cohn, Economic Planner for Bellevue, has provided a comprehensive article on managing Bellevue's 1984 population and housing survey. We continue to encourage anyone who prepares population estimates for cities, towns, or counties to share your experiences and knowledge by submitting an article for publication.

ACKNOWLEDGEMENTS

Special thanks are given to the following persons and agencies because of their continued help and cooperation in the publication of Population Trends: The Vital Statistics Health Data Section, Department of Social and Health Services, for supplying vital statistics data; Office of Research and Data Analysis, Department of Social and Health Services, for the provision of selected institutional population counts; the Department of Veteran's Affairs, for providing veteran institutional counts; the housing directors of the colleges and universities, who submit April 1 dormitory counts; the Armed Forces personnel at major bases in the state who have provided excellent data on current armed forces counts; and all of the city staff, and county and regional planners who have helped in providing data used in the development of our April 1 estimates.

We welcome comments regarding the content or format of this publication.

Office of Financial Management
Policy Analysis and Forecasting Division

HIGHLIGHTS

- Washington's estimated April 1, 1984, population is 4,328,100. This is an increase of 43,000 (1.0 percent) over last year's population of 4,285,100. Net inmigration for the 1983-84 period is 6,350, compared to an estimated net loss of -16,000 for 1982-83. The recent inmigration population gain reflects the state's improved economy.

- Between 1980 and 1984, the state's incorporated population increased from 2,123,672 to 2,165,585, an increase of 41,913. Forty-six percent of this increase was due to annexation.

- Seventy-five square miles containing 19,485 persons have been annexed by cities since 1980. Cities annexing territory with the largest number of persons were Des Moines (5,014) Kennewick (2,872), and Mulkiteo (2,834).

- Washington gained a new city, Mill Creek, in September of 1983. Mill Creek, with a population of 3,561, represents the first incorporation since Ocean Shores in 1970.

- Unincorporated population growth continues to outpace increases in cities and towns. The state's unincorporated population increased from 2,008,532 to 2,162,515 in 1984, or 7.7 percent, compared to a 2.0 percent increase for cities and towns.

- Washington's population aged 65 years and over increased from 327,160 in 1970 to 431,562 (32.0 percent) in 1980, and is estimated to have increased to 484,570 in 1984. Persons aged 65 years and over represented 10.4 percent of the state population in 1980; this percentage increased to 11.2 by 1984.

- Washington's nonwhite population increased from 352,986 in 1980 to an estimated 401,276 in 1983. This represents a total change of 48,290, or 13.7 percent, over the three year period.

- By racial categories, the Asian and black populations show the largest increases. Washington's Asian population increased from 110,052 in 1980 to 136,399 (23.9 percent) by 1983. The black population increased from 105,574 to 117,916 (11.7 percent).

- The marriage rate in Washington remained at approximately 11.8 per 1,000 population from 1977 to 1981. A slight decline is shown for 1982 (11.3) and 1983 (10.8).

- The divorce/dissolution rate in Washington has dropped from an historical high of 7.6 per 1,000 population in 1976 to 6.4 in 1983. The divorce rate for 1983 is the lowest since 1973.

- The number of annual births in Washington has stabilized, and even declined slightly, since its dramatic rise during the 1970's. Births in the state rose from 53,096 in 1972 to 70,051 in 1982, but dropped to 69,297 by 1984.

- Population in Washington's mental and correctional institutions declined between 1970 (13,039) and 1980 (9,351), but has increased to 11,431 in 1984. This number includes veterans and juvenile homes, as well as schools for the deaf, blind, and mentally disabled.

- The number and proportion of women in the Armed Forces in Washington increased from 1,088 (1.8 percent) in 1970 to 3,569 (6.7 percent) in 1980.

- In 1980, Armed Forces personnel in Washington totaled slightly over 53,000. Of these, 41.9 percent were living in barracks or on ships, 3.7 percent were living in military housing and, 54.4 percent were residing in owned or rented off-base housing

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POPULATION AND HOUSING

TABLE 1

OFFICIAL APRIL 1, 1984, POPULATION
FOR CITIES, TOWNS, AND COUNTIES
STATE OF WASHINGTON

*Special City Census

Municipality	1980	1981	1982	1983	1984
ADAMS	13,267	13,100	13,100	13,600	13,700
UNINCORPORATED	6,031	5,842	5,970	6,201	6,319
INCORPORATED	7,236	7,258	7,130	7,399	7,381
Hatton	81	80	85	95	91*
Lind	567	570	560	594*	590
Othello	4,522*	4,530	4,390	4,570*	4,550
Ritzville	1,800	1,800	1,820	1,860	1,850
Washtucna	266	278*	275	280	300
ASOTIN	16,823	17,000	17,000	16,800	16,900
UNINCORPORATED	8,974	9,130	9,210	9,190	9,148
INCORPORATED	7,849	7,870	7,790	7,610	7,752
Asotin	946*	940	910	910	992*
Clarkston	6,903	6,930	6,880	6,700	6,760
BENTON	109,444	113,400	111,700	108,700	107,700
UNINCORPORATED	32,395	34,947	32,726	31,101	28,995
INCORPORATED	77,049	78,453	78,974	77,599	78,705
Benton City	2,087*	2,150	1,970	1,880	1,975
Kennewick	34,397	34,700	35,350	35,700	37,240
Prosser	4,049	4,120	4,170	4,150	4,180
Richland	33,578	33,700	33,550	32,000	31,660
West Richland	2,938	3,783*	3,934*	3,869*	3,650
CHELAN	45,061	46,200	45,500	46,500	47,500
UNINCORPORATED	20,791	21,713	21,120	22,195	22,830
INCORPORATED	24,270	24,487	24,380	24,305	24,670
Cashmere	2,240	2,260	2,290	2,280	2,295
Chelan	2,802	2,930	2,960	2,950	3,030
Entiat	445	467*	465	425	500*
Leavenworth	1,526	1,530	1,540	1,500	1,515
Wenatchee	17,257	17,300	17,125	17,150	17,330
CLALLAM	51,648	52,500	52,100	52,200	52,900
UNINCORPORATED	28,264#	29,000#	28,620	29,070	29,551
INCORPORATED	23,384	23,500	23,480	23,130	23,349
Forks	3,060#	3,020#	3,000	2,850	2,849*
Port Angeles	17,311	17,300	17,300	17,100	17,220
Sequim	3,013	3,180	3,180	3,180	3,280
CLARK	192,227	195,800	198,600	200,000	201,700
UNINCORPORATED	134,979	138,491	141,055	142,910	144,165
INCORPORATED	57,248	57,309	57,545	57,090	57,535
Battle Ground	2,774	2,939*	2,950	2,935*	2,980
Camas	5,681	5,700	5,580	5,500	5,500
LaCenter	439	440	440	440	400
Ridgefield	1,062	1,080	1,090	1,090	1,130
Vancouver	42,834	42,600	42,950	42,600	42,850
Washougal	3,834	3,910	3,900	3,890	4,040
Woodland (Part)	80*	80	75	80	80
Yacolt	544	560	560	555	555
COLUMBIA	4,057	4,000	4,000	4,000	4,100
UNINCORPORATED	1,294	1,230	1,176	1,135	1,225
INCORPORATED	2,763	2,770	2,824	2,865	2,875
Dayton	2,565	2,570	2,590	2,630	2,640
Starbuck	198	200	234*	235	235
COWLITZ	79,548	80,500	79,500	79,300	79,900
UNINCORPORATED	31,654	32,490	31,656	32,360	33,475
INCORPORATED	47,894	48,010	47,844	46,940	46,425
Castle Rock	2,162	2,170	2,160	2,140	2,125
Kalama	1,216	1,200	1,179*	1,170	1,170
Kelso	11,129	11,150	11,075	11,000	10,840
Longview	31,052	31,100	30,950	30,100	29,820
Woodland (Part)	2,335*	2,390	2,480	2,530	2,470
DOUGLAS	22,144	22,800	22,400	22,400	22,600
UNINCORPORATED	17,374	18,053	17,727	17,783	17,887
INCORPORATED	4,770	4,747	4,673	4,617	4,713
Bridgeport	1,174	1,100	1,090	1,020	1,045
Coulee Dam (Part)	242*	252*	223*	234*	223*
East Wenatchee	1,640	1,650	1,620	1,605	1,670
Mansfield	315	365	340	388	385*
Rock Island	491	465	500	485	510
Waterville	908	915	900	885	880*
FERRY	5,811	6,000	6,100	6,100	6,100
UNINCORPORATED	4,793	4,995	5,140	5,085	5,140
INCORPORATED	1,018	1,005	960	1,015	960
Republic	1,018	1,005*	960	1,015	960
FRANKLIN	35,025	36,700	36,200	36,000	36,300
UNINCORPORATED	14,138#	15,475#	14,700	14,580	14,799
INCORPORATED	20,887#	21,225#	21,500	21,420	21,501
Connell	1,981	1,970	1,960	1,840	2,065*
Kahlotus	201	205	215	210	226*
Mesa	278	350	275	270	280
Pasco	18,425#	18,700#	19,050	19,100	18,930

Municipality	1980	1981	1982	1983	1984
GARFIELD	2,468	2,400	2,400	2,400	2,500
UNINCORPORATED	752	670	690	725	825
INCORPORATED	1,716	1,730	1,710	1,675	1,675
Pomeroy	1,716	1,730	1,710	1,675	1,675
GRANT	48,522	48,600	48,600	49,100	49,500
UNINCORPORATED	22,005	22,142	22,257	22,348	22,603
INCORPORATED	26,517	26,458	26,343	26,752	26,897
Coulee City	510	536*	561*	599*	631*
Coulee Dam (Part)	2*	2*	2*	4*	2*
Electric City	927	960	980	960	965
Ephrata	5,359	5,430	5,440	5,440	5,440
George	261	260	255	293*	285
Grand Coulee	1,180	1,200	1,240	1,230	1,210
Hartline	165	165	165	165	165
Krupp	87*	85	70	65	80*
Mattawa	299	310	320*	360	421*
Moses Lake	10,629	10,400	10,310	10,300	10,350
Quincy	3,525	3,470	3,390	3,658*	3,620
Royal City	676	803*	800	795	815
Soap Lake	1,196	1,200	1,210	1,240	1,275
Warden	1,479	1,417*	1,410	1,463*	1,470
Wilson Creek	222	220	190	180	188*
GRAYS HARBOR	66,314	66,800	66,100	65,800	65,100
UNINCORPORATED	24,627	24,878	24,422	25,069	25,151
INCORPORATED	41,687	41,922	41,678	40,731	39,949
Aberdeen	18,739	18,700	18,550	18,050	17,400
Cosmopolis	1,575	1,570	1,570	1,545	1,535
Elma	2,720	2,930	2,950	2,670	2,450
Hoquiam	9,719	9,630	9,490	9,200	9,390
McCleary	1,419	1,430	1,440	1,430	1,440
Montesano	3,247	3,270	3,220	3,240	3,230
Oakville	537	554*	500	581	599*
Ocean Shores	1,777*	1,848*	1,918*	2,015	2,055
Westport	1,954	1,990	1,990	2,000	1,850
ISLAND	44,048	45,200	46,000	47,000	47,800
UNINCORPORATED	30,117	31,192	32,010	33,135	33,767
INCORPORATED	13,931	14,008	13,990	13,865	14,033
Coupeville	1,006	1,010	1,050	1,005	1,098*
Langley	654*	681*	690	710	725
Oak Harbor	12,271	12,317*	12,250	12,150	12,210
JEFFERSON	15,965	16,600	16,900	16,800	17,000
UNINCORPORATED	9,898	10,440	10,750	10,600	10,750
INCORPORATED	6,067	6,160	6,150	6,200	6,250
Port Townsend	6,067	6,160	6,150	6,200	6,250
KING	1,269,749	1,309,800	1,311,400	1,315,800	1,326,600
UNINCORPORATED	502,944#	538,494	538,251#	538,734	538,308
INCORPORATED	766,805#	771,306	773,149#	777,066	788,292
Algona	1,467	1,500	1,520	1,560	1,555
Auburn	26,417	27,800	28,950	29,000	29,170
Beaux Arts	328	320	307*	307*	305
Bellevue	73,903	75,500	74,300	73,900	78,620
Black Diamond	1,170	1,160	1,120	1,095	1,125
Bothell (Part)	7,943	7,475*	7,480	7,590	7,740
Carnation	951*	950	951*	950	1,100*
Clyde Hill	3,229	3,210	3,140	3,120	3,100
Des Moines	7,378	7,650	7,840	10,250	13,100
Duvall	729	823*	872*	953*	996*
Enumclaw	5,427	5,700	5,790	5,775	5,920
Hunts Point	483*	483*	525*	525	530
Issaquah	5,536	5,560	5,550	5,550	5,570
Kent	22,961#	23,400	23,600#	25,500	26,250
Kirkland	18,779	19,000	19,275	18,850	18,670
Lake Forest Park	2,485	2,470	2,460	2,430	2,420
Medina	3,220	3,170	3,120	3,100	3,110
Mercer Island	21,522	21,400	21,125	21,150	20,910
Milton (Part)	218	220	320	390	400
Normandy Park	4,268	4,190	4,110	6,000	5,960
North Bend	1,701	1,740	1,740	1,705	1,770
Pacific	2,261	2,260	2,350	2,330	2,380
Redmond	23,318	24,600	25,300	26,300	27,340
Renton	31,031#	32,200	33,100	32,700	33,340
Seattle	493,846	492,200	492,000	489,700	490,300
Skykomish	209	215	215	220	226*
Snoqualmie	1,370	1,450	1,450	1,475	1,480
Tukwila	3,578	3,580	3,600	3,600	3,860
Yarrow Point	1,077*	1,080	1,039	1,041*	1,045*
KITSAP	147,152#	156,800#	158,500	161,600	162,500
UNINCORPORATED	100,508#	109,168#	112,245	115,235	117,400
INCORPORATED	46,644	47,632	46,255	46,365	45,100
Bremerton	36,208	37,000	35,475	35,475	33,970
Port Orchard	4,787	4,810	4,870	4,850	4,840
Poulsbo	3,453	3,480	3,490	3,600	3,720
Winslow	2,196	2,342*	2,420	2,440	2,570

KITTITAS	24,877	25,100	25,100	24,900	25,000
UNINCORPORATED	9,109	9,160	9,200	9,170	9,195
INCORPORATED	15,768	15,940	15,900	15,730	15,805
Cle Elum	1,773	1,770	1,760	1,775	1,820
Ellensburg	11,755	11,900	11,775	11,550	11,590
Kittitas	853*	870	920	955	935
Roslyn	938	940	970	975	980
South Cle Elum	449	460	475	475	480
KLICKITAT	15,822	16,200	16,200	16,300	16,500
UNINCORPORATED	9,715#	9,930#	9,955	10,030	10,250
INCORPORATED	6,107#	6,270#	6,245	6,270	6,250
Bingen	679*	680	645*	650	650
Goldendale	3,575#	3,710#	3,720	3,690	3,660
White Salmon	1,853	1,880	1,880	1,930	1,940
LEWIS	56,025#	56,700#	56,400	56,000	56,600
UNINCORPORATED	33,320	33,600	33,517	33,237	33,882
INCORPORATED	22,705#	23,100#	22,883	22,763	22,718
Centralia	11,555#	12,000#	11,800	11,700	11,770
Chehalis	6,100	6,000	5,990	6,025	5,950
Morton	1,264	1,260	1,240	1,220	1,215
Mossyrock	463	465	445	460	475
Napavine	611	640	705*	730	725
PeEll	617	650	635	590	598*
Toledo	637	620*	623*	593*	565*
Vader	406	405	395	410	395*
Winlock	1,052	1,060	1,050	1,035	1,025
LINCOLN	9,604	9,600	9,600	9,600	9,800
UNINCORPORATED	3,769	3,662	3,695	3,722	3,860
INCORPORATED	5,835	5,938	5,905	5,878	5,940
Almira	349*	357*	365	355	345
Creston	318*	340	330	321	310
Davenport	1,559	1,570	1,570	1,580	1,600
Harrington	507	520	510	512	510
Odessa	1,009	1,031*	1,040	1,020	1,094*
Reardan	498	500	495	485	485
Sprague	473	480	495	470	476*
Wilbur	1,122	1,140	1,100	1,135	1,120
MASON	31,184	31,900	32,700	33,600	34,800
UNINCORPORATED	23,555	24,300	24,960	26,000	27,200
INCORPORATED	7,629	7,600	7,740	7,600	7,600
Shelton	7,629	7,600	7,740	7,600	7,600
OKANOGAN	30,663#	30,900	31,300	31,500	31,900
UNINCORPORATED	16,455	16,686	17,074	17,466	17,867
INCORPORATED	14,208	14,214	13,926	14,034	14,033
Brewster	1,337	1,350	1,320	1,360	1,365
Conconully	157	160	155	168	162*
Coulee Dam (Part)	1,195*	1,130*	1,046*	1,058*	1,018*
Elmer City	312	320	305	305	323*
Nespelem	284	295	290	295	280
Okanogan	2,326#	2,359*	2,360	2,350	2,350
Omak	4,007	4,000	3,940	3,910	3,910
Oroville	1,483	1,500	1,490	1,480	1,500
Pateros	555	560	550	525	530
Riverside	243	235	230	240	265*
Tonasket	985	980	950	1,060	1,060
Twisp	911	950	870	888	850
Winthrop	413	430	420	415	420
PACIFIC	17,237	17,800	17,700	17,600	17,700
UNINCORPORATED	10,713	11,200	11,100	11,147	11,142
INCORPORATED	6,524	6,600	6,600	6,453	6,558
Ilwaco	604*	600	590	593	588*
Long Beach	1,243*	1,300	1,350	1,300	1,335
Raymond	2,991	3,000	2,970	2,920	3,000
South Bend	1,686	1,700	1,690	1,640	1,635
PEND OREILLE	8,580	8,800	8,800	8,900	9,100
UNINCORPORATED	5,589	5,795	5,921	6,025	6,201
INCORPORATED	2,991	3,005	2,879	2,875	2,899
Cusick	246	250	250	240	259*
Ione	594	590	580	585	585
Metaline	190	190	203	195	200
Metaline Falls	296	295	290	285	290
Newport	1,665	1,680	1,556*	1,570	1,570
PIERCE	485,667#	501,300	504,500	507,000	514,600
UNINCORPORATED	272,586	286,035#	288,230	292,054	298,073
INCORPORATED	213,081#	215,265#	216,270	214,946	216,527
Bonney Lake	5,328	5,720	6,020	5,975	6,260
Buckley	3,143	3,100	3,090	3,110	3,200
Carbonado	456	450	425	470	460
Du Pont	559	564*	560	560	587*
Eatonville	998	1,020	1,030	1,075	1,125
Fife	1,823	2,110	2,480	2,390	2,425
Fircrest	5,477	5,480	5,250	5,400	5,320
Gig Harbor	2,429	2,430	2,480	2,580	2,550
Milton (Part)	2,944	3,000	2,840	3,010	3,070
Orting	1,787#	1,810#	1,820	1,810	1,875
Puyallup	18,251	18,200	18,575	18,550	18,600
Roy	417	415	410	321*	355
Ruston	623*	620	620	620	620
South Prairie	202	210	210	215	230
Steilacoom	4,886	4,870	4,830	4,990	4,950
Sumner	4,936	5,130	5,190	5,130	5,160
Tacoma	158,501	159,800	160,100	158,400	159,400
Wilkeson	321	336*	340	340	340
SAN JUAN	7,838	8,100	8,500	8,700	8,900
UNINCORPORATED	6,638	6,880	7,250	7,470	7,650
INCORPORATED	1,200	1,220	1,250	1,230	1,250
Friday Harbor	1,200	1,220	1,250	1,230	1,250
SKAGIT	64,138	64,900	65,600	66,100	66,800
UNINCORPORATED	30,292	30,435	30,670	31,355	31,745
INCORPORATED	33,846	34,465	34,930	34,745	35,055
Anacortes	9,013	9,200	9,280	9,425	9,510
Burlington	3,894	3,900	3,890	3,870	3,870
Concrete	592	585	580	570	565
Hamilton	283	280	265	220	220
La Conner	660*	660	650	645	645
Lyman	285	280	280	240	255
Mount Vernon	13,009	13,300	13,625	13,600	13,730
Sedro Woolley	6,110	6,260	6,360	6,225	6,260
SKAMANIA	7,919	8,100	8,000	7,800	7,900
UNINCORPORATED	6,315	6,546	6,382	6,213	6,335
INCORPORATED	1,604	1,554	1,618	1,587	1,565
North Bonneville	432*	424*	418*	427*	415*
Stevenson	1,172	1,130	1,200	1,160	1,150
SNOHOMISH	337,720#	353,400#	356,400	360,900	366,700
UNINCORPORATED	186,491#	196,031#	198,950	203,964	204,053
INCORPORATED	151,229#	157,369#	157,450	156,936	162,647
Arlington	3,282	3,270	3,270	3,330	3,270
Bothell (Part)			10	10	40
Brier	2,915	2,920	2,890	3,210	3,390
Darrington	1,064	1,100	1,090	1,020	1,005*
Edmonds	27,679#	28,300#	27,400	27,000	27,880
Everett	54,413	56,000	56,700	56,200	56,680
Gold Bar	794	800	850	850	845
Granite Falls	911	920	910	890	895
Index	147	140	135	135	142*
Lake Stevens	1,660	1,870	1,680	1,720	1,740
Lynnwood	22,641#	23,700	23,375	23,000	23,139*
Marysville	5,544	5,599*	6,150	6,275	6,350
Mill Creek	-	-	-	-	3,561*
Monroe	2,869	3,020	3,040	3,000	3,050
Mountlake Terrace	16,534	16,200	15,950	16,000	16,020
Mukilteo	1,426	4,310	4,390	4,670	4,945*
Snohomish	5,294	5,310	5,520	5,450	5,500
Stanwood	1,546#	1,670	1,670	1,660	1,555*
Sultan	1,578	1,610	1,570	1,656*	1,750
Woodway	832	830	850	850	890
SPOKANE	341,835	347,600	348,100	348,000	349,400
UNINCORPORATED	152,164	158,055	158,090	159,337	159,481
INCORPORATED	189,671	189,545	190,010	188,663	189,919
Airway Heights	1,730	1,700	1,730	1,890	1,795
Cheney	7,630	7,650	7,540	7,600*	7,540
Deer Park	2,140	2,190	2,220	2,240	2,260
Fairfield	582	550	610	601	585
Latah	155	155	160	159*	171*
Medical Lake	3,600	3,580	3,540	3,510	3,600
Millwood	1,717	1,710	1,690	1,700	1,685
Rockford	442	440	435	431	430
Spangle	276	280	275	227	240*
Spokane	171,300	171,200	171,700	170,200	171,500
Waverly	99	90	110*	105	113*
STEVENS	28,979	29,500	29,400	29,700	30,100
UNINCORPORATED	20,398	20,819	20,752	21,063	21,340
INCORPORATED	8,581	8,681	8,648	8,637	8,760
Chewelah	2,012*	2,021*	2,029*	2,030	2,045
Colville	4,603*	4,640	4,610	4,580	4,630
Kettle Falls	1,087	1,110	1,134*	1,170	1,225
Marcus	174	175	170	170	170
Northport	424*	455*	435*	457*	455*
Springdale	281	280	270	230	235*
THURSTON	124,264	129,100	131,300	133,500	136,200
UNINCORPORATED	72,188	76,320	78,155	80,098	81,345
INCORPORATED	52,076	52,780	53,145	53,402	54,855
Bucoda	519	520	520	540	535
Lacey	13,940	14,200	14,175	14,030	14,520
Olympia	27,447	27,600	27,700	28,000	28,790
Rainier	891	1,020	990	992*	1,010
Tenino	1,280	1,310	1,340	1,400	1,375
Tumwater	6,705	6,690	7,000	7,050	7,240
Yelm	1,294	1,440	1,420	1,390	1,385
WAHKIAKUM	3,832	3,800	3,800	3,700	3,800
UNINCORPORATED	3,197	3,170	3,170	3,075	3,175
INCORPORATED	635	630	630	625	625
Cathlamet	635	630	630	625	625
WALLA WALLA	47,435	47,900	48,300	48,200	48,500
UNINCORPORATED	14,650	15,246	15,332	15,570	15,691
INCORPORATED	32,785	32,654	32,968	32,630	32,809
College Place	5,790	5,900	5,990	5,675	5,813*
Prescott	341	294*	318*	295*	296*
Waitsburg	1,035	1,060	1,060	1,060	1,060
Walla Walla	25,619	25,400	25,600	25,600	25,640

WHATCOM	106,701	109,900	111,100	112,100	113,700
UNINCORPORATED	48,622	50,966	52,314	52,916	54,094
INCORPORATED	58,079	58,934	58,786	59,184	59,606
Bellingham	45,794	46,400	45,950	45,900	46,010
Blaine	2,363	2,350	2,320	2,390	2,325
Everson	898	940	970	1,000	1,060
Ferndale	3,855	4,020	4,120	4,390	4,440
Lynden	4,028	4,080	4,250	4,220	4,430
Nooksack	429	430	425	503*	570
Sumas	712	714*	751*	781*	771*
WHITMAN	40,103	40,400	40,200	39,900	39,700
UNINCORPORATED	7,347	7,273	7,650	7,694	7,883
INCORPORATED	32,756	33,127	32,550	32,206	31,817
Albion	631	640	650	635	625
Colfax	2,780	2,780	2,780	2,820	2,780
Colton	307	305	300	290	290
Endicott	290	311*	321*	315	303*
Farmington	176	175	175	175	180
Garfield	599	622*	610	611	595
LaCrosse	373	420*	407*	395*	371*
LaMont	101	100	80	90	87*
Malden	209*	215	210	205	205
Oakesdale	444	440	435	435	440
Palouse	1,005	1,010	1,010	980	931*
Pullman	23,579	23,800	23,250	23,000	22,770
Rosalia	572	580	590	570	575
Saint John	550*	555*	552*	537*	508*
Tekoa	854	870	860	835	860
Uniontown	286	304*	320	313	297*
YAKIMA	172,508	175,000	175,200	177,000	180,000
UNINCORPORATED	83,462#	85,311#	85,220	88,200	89,715
INCORPORATED	89,046#	89,689#	89,980	88,800	90,285
Grandview	5,615	6,000	5,830	6,300	6,440
Granger	1,812	1,840	1,840	1,810	1,785
Harrah	343	345	360	345	350
Mabton	1,248	1,234*	1,250	1,235	1,275
Moxee City	687	700	730	745	740
Naches	655*	670	640	645	675
Selah	4,500#	4,560#	4,610	4,520	4,610
Sunnyside	9,225	9,290	9,460	9,450	9,740
Tieton	528	540	600	560	540
Toppenish	6,517	6,560	6,550	6,575	6,570
Union Gap	3,184	3,180	3,160	3,120	3,140
Wapato	3,307	3,350	3,360	3,310	3,350
Yakima	49,826	49,800	49,900	48,500	49,340
Zillah	1,599	1,620	1,690	1,685	1,730
STATE TOTAL	4,132,204#	4,250,200#	4,264,000	4,285,100	4,328,100
UNINCORPORATED	2,008,532#	2,105,770#	2,117,312#	2,143,262	2,162,515
INCORPORATED	2,123,672#	2,144,430#	2,146,688#	2,141,838	2,165,585

1. Total population counts for the four Washington cities split between two or more counties are:

	1980	1981	1982	1983	1984
Bothell	(no split)	(no split)	7,490	7,600	7,780
Coulee Dam	1,439*	1,384*	1,271*	1,296*	1,243
Milton	3,162	3,220	3,160	3,400	3,470
Woodland	2,415*	2,470	2,555	2,610	2,550

2. Mill Creek incorporated in September 1983.

3. The county and municipal populations shown for 1980 are, with a few exceptions, the 1980 Federal Census final counts. Jurisdictions will be advised if any further corrections are received.

4. (*)Cities and Towns with March 1, 1980, city special census counts greater than the Federal 1980 Census count, and those which took a special census in subsequent years.

5. 1980 Federal census count has been adjusted for annexations from January 1, 1980, to April 1, 1980.

6. The 1981 estimates have been revised on the basis of corrections to the 1980 census counts that were provided by the Bureau of the Census in correspondence dated August 18, 1981, and February 18, 1982.

(#) Indicates a correction to the 1980 census count and/or a revised 1981 estimate.

With the exception of corrections to the Federal census counts, annual estimates in this official series are not revised on the basis of other information that becomes available after the estimate date. Revised county estimates are published regularly in a revised county series.

OFM/PAF/P-110
8/84

TABLE 2

HOUSING UNITS FOR CITIES, TOWNS AND COUNTIES
STATE OF WASHINGTON
1980-1984

	1980[3]	1981	1982	1983	1984
ADAMS	5,049	5,073	5,130	5,197	5,239
Unincorporated	2,115	2,141	2,181	2,217	2,256
Incorporated	2,934	2,932	2,949	2,980	2,983
Hatton	31	29	31	34	29[1]
Lind	268	270	268	283[1]	281
Othello	1,632[1]	1,634	1,632	1,620[1]	1,615
Ritzville	889	891	912	934	935
Washtucna	114	108[1]	106	109	123
ASOTIN	7,043	7,163	7,241	7,291	7,373
Unincorporated[3]	3,603	3,702	3,783	3,833	3,892
Incorporated	3,440	3,461	3,458	3,458	3,481
Asotin	363[1]	364	363	365	388[1]
Clarkston	3,077	3,097	3,095	3,093	3,093
BENTON	42,651	43,649	44,425	44,427	45,029
Unincorporated[3]	11,176	11,216	11,485	11,038	10,981
Incorporated	31,475	32,433	32,940	33,389	34,048
Benton City	805[1]	850	764	771	786
Kennewick	14,456	14,813	15,185	15,613	16,251
Prosser	1,559	1,603	1,640	1,661	1,667
Richland	13,387	13,610	13,745	13,762	13,785
W. Richland	1,268	1,557[1]	1,606[1]	1,582[1]	1,559
CHELAN	22,140	22,476	22,815	23,145	23,636
Unincorporated	11,249	11,483	11,737	12,018	12,418
Incorporated	10,891	10,993	11,078	11,127	11,218
Cashmere	957	966	984	987	994
Chelan	1,346	1,414	1,441	1,454	1,487
Entiat	204	187[1]	202	208	181[1]
Leavenworth	702	709	713	717	724
Wenatchee	7,682	7,717	7,738	7,761	7,832
CLALLAM	21,851	22,263	22,708	22,904	23,266
Unincorporated	11,808	12,069	12,495	12,716	12,949
Incorporated	10,043	10,194	10,213	10,188	10,317
Forks	1,158	1,142	1,137	1,105	1,122[1]
Port Angeles	7,288	7,407	7,426	7,433	7,459
Sequim	1,597	1,645	1,650	1,650	1,736
CLARK	72,806	74,436	75,946	77,208	78,498
Unincorporated	47,137	48,569	49,716	50,887[6]	51,932
Incorporated	25,669	25,887	26,230	26,321	26,566
Battle Ground	1,022	1,069[1]	1,074	1,096[1]	1,116
Camas	2,237	2,258	2,259	2,252	2,266
LaCenter	174	175	175	175	175
Ridgefield	403	411	413	413	426
Vancouver	19,894	19,988	20,316	20,371	20,503
Washougal	1,687	1,727	1,736	1,759	1,823
Woodland (Part)	41[1]	41	41	41	41
Yacolt	211	218	216	214	216
COLUMBIA	1,819	1,826	1,843	1,881	1,890
Unincorporated[3]	599	609	620	635	649
Incorporated	1,220	1,217	1,223	1,246	1,241
Dayton	1,122	1,126	1,130	1,153	1,148
Starbuck	98	91	93[1]	93	93
COWLITZ	31,748	32,042	32,382	32,520	32,742
Unincorporated	11,622	11,814	12,066	12,257	12,430
Incorporated	20,126	20,228	20,316	20,263	20,312
Castle Rock	865	873	875	880	881
Kalama	500	501	492[1]	495	494
Kelso	4,794	4,831	4,830	4,824	4,811
Longview	13,118	13,152	13,186	13,130	13,190
Woodland (Part)	849[1]	871	933	934	936
DOUGLAS	9,139	9,281	9,318	9,394	9,556
Unincorporated[3]	6,924	7,060	7,114	7,210	7,380
Incorporated	2,215	2,221	2,204	2,184	2,176
Bridgeport	572	536	520	494	502
Coulee Dam (Part)	98[1]	103[1]	103[1]	99[1]	99[1]
E. Wenatchee	803	814	811	826	827[1]
Mansfield	149	169	168	167	169
Rock Island	161	164	167	164	167
Waterville	432	435	435	434	412[1]
FERRY	2,394	2,476	2,535	2,607	2,644
Unincorporated	1,960	2,033	2,107	2,165	2,229
Incorporated	434	443	428	442	415
Republic	434	443[1]	428	442	415
FRANKLIN	13,316	13,566	13,815	14,019	14,061
Unincorporated[3]	4,704	4,789	4,932	4,983	5,045
Incorporated	8,612	8,777	8,883	9,036	9,016
Connell	687	680	680	696	694[1]
Kahlotus	104	106	102	108	96[1]
Mesa	118	114	116	116	112
Pasco	7,703[3]	7,877	7,985	8,116	8,114

	1980[3]	1981	1982	1983	1984
GARFIELD	1,142	1,158	1,162	1,165	1,179
Unincorporated[3]	363	378	383	387	399
Incorporated	779	780	779	778	780
Pomeroy	779	780	779	778	780
GRANT	20,271	20,472	20,670	20,991	21,448
Unincorporated	8,983	9,175	9,339	9,583	9,913
Incorporated	11,288	11,297	11,331	11,408	11,535
Coulee City	282	297[1]	298[1]	300[1]	330[1]
Coulee Dam (Part)	1[1]	1[1]	1[1]	1	1[1]
Electric City	391	415	424	421	430
Ephrata	2,327	2,333	2,334	2,340	2,353
George	115	115	115	118[1]	104
Grand Coulee	655	666	676	688	671
Hartline	89	90	91	90	89
Krupp	31[1]	32	30	30	37[1]
Mattawa	133	139	140[1]	167	200[1]
Moses Lake	4,224	4,184	4,206	4,244	4,281
Quincy	1,355	1,363	1,351[1]	1,344	1,336
Royal City	263	271[1]	272	267	278
Soap Lake	840	805	815	822	843
Warden	480	484[1]	482	478[1]	483
Wilson Creek	102	102	96	98	99[1]
GRAYS HARBOR	28,598	29,099	29,427	29,571	29,792
Unincorporated[3]	10,182	10,444	10,641	10,792	10,939
Incorporated	18,416	18,655	18,786	18,779	18,853
Aberdeen	8,088	8,109	8,109	8,093	8,073
Cosmopolis	585	587	592	591	588
Elma	1,102	1,197	1,250	1,159	1,085
Hoquiam	3,988	3,978	4,004	4,019	4,041
McCleary	576	584	584	590	632
Montesano	1,299	1,303	1,305	1,304	1,330
Oakville	222	226[1]	225	227	230[1]
Ocean Shores	1,308[1]	1,380[1]	1,421[1]	1,496	1,569
Westport	1,248	1,291	1,296	1,300	1,305
ISLAND	20,872	21,491	21,997	22,481	23,266
Unincorporated	15,609	16,161	16,657	17,086	17,586
Incorporated	5,263	5,330	5,340	5,395	5,680
Coupeville	498	496	501	507	559[1]
Langley	358[1]	362[1]	365	372	391
Oak Harbor	4,407	4,472[1]	4,474	4,516	4,730
JEFFERSON	8,826	9,119	9,371	9,584	9,779
Unincorporated[3]	6,217	6,458	6,690	6,868	7,005
Incorporated	2,609	2,661	2,681	2,716	2,774
Port Townsend	2,609	2,661	2,681	2,716	2,774
KING	525,556	536,578	546,241	554,820	565,862
Unincorporated[3]	183,264	188,607	194,034	196,836	201,428
Incorporated	342,292	347,971	352,207	357,984	364,434
Algona	564	579	584	604	608
Auburn	11,343	11,794	12,479	12,708	12,875
Beaux Arts	113	113	113[1]	115[1]	115
Bellevue	29,315	29,664	30,178	30,524	31,242
Black Diamond	456	461	461	449	482
Bothell (Part)	3,064	3,103[1]	3,140	3,201	3,253
Carnation	352[1]	363	366[1]	367	406[1]
Clyde Hill	1,020	1,025	1,025	1,036	1,048
Des Moines	3,256	3,402	3,602	4,638	5,854
Duvall	272	307[1]	329[1]	344[1]	362[1]
Enumclaw	2,328	2,431	2,474	2,541	2,641
Hunts Point	185[1]	190[1]	191[1]	191	192
Issaquah	2,270	2,302	2,321	2,443	2,479
Kent	10,942	11,144	11,358	12,516	12,814
Kirkland	8,259	8,466	8,680	8,817	8,942
Lake Forest Pk.	897	904	921	924	925
Medina	1,146	1,146	1,147	1,159	1,171
Mercer Island	7,800	7,869	7,897	7,923	7,929
Milton (Part)	118	143	164	201	213
Normandy Park	1,440	1,444	1,445	2,273	2,289
North Bend	722	743	745	744	794
Pacific	906	925	959	912	943
Redmond	8,728	9,343	9,533	9,997	10,328
Renton	13,739	14,588	15,125	15,288	15,804
Seattle	230,039	232,472	233,906	234,981	237,478
Skykomish	157	162	164	162	164[1]
Snoqualmie	551	579	584	605	607
Tukwila	1,938	1,938	1,945	1,949	2,103
Yarrow Point	372[1]	371	371	372[1]	373[1]
KITSAP	57,327	59,502	60,536	61,810	63,565
Unincorporated[3]	37,874	39,844	40,744	41,968	43,539
Incorporated	19,453	19,658	19,792	19,842	20,026
Bremerton	14,960	15,120	15,149	15,156	15,207
Port Orchard	1,950	1,958	1,988	1,997	2,009
Poulsbo	1,482	1,496	1,497	1,528	1,591
Winslow	1,061	1,084[1]	1,158	1,161	1,219

TABLE 2 (CONT.)

HOUSING UNITS FOR CITIES, TOWNS AND COUNTIES
STATE OF WASHINGTON
1980-1984

	1980[2]	1981	1982	1983	1984
KITTITAS	11,709	11,938	12,087	12,279	12,411
Unincorporated[3]	4,845	4,996	5,136	5,268	5,382
Incorporated	6,864	6,942	6,951	7,011	7,029
Cle Elum	885	888	891	896	920
Ellensburg	4,892	4,942	4,919	4,966	4,954
Kittitas	316[1]	333	356	361	362
Roslyn	580	585	583	581	584
S. Cle Elum	191	194	202	207	209
KLICKITAT	6,498	6,736	6,863	7,040	7,172
Unincorporated[3]	3,909	4,071	4,192	4,376	4,503
Incorporated	2,589	2,665	2,671	2,664	2,669
Bingen	335[1]	338	322[1]	322	326
Goldendale	1,452	1,516	1,535	1,524	1,517
White Salmon	802	811	814	818	826
LEWIS	23,119	23,412	23,685	23,868	24,113
Unincorporated[3]	13,415	13,606	13,846	14,004	14,205
Incorporated	9,704	9,806	9,839	9,864	9,908
Centralia	5,039	5,126	5,164	5,175	5,212
Chehalis	2,527	2,528	2,528	2,521	2,522
Morton	542	545	545	544	542
Mossyrock	217	219	214	223	224
Napavine	231	242	253[1]	262	263
Pe Ell	261	257	256	251	254[1]
Toledo	279	275[1]	270[1]	271[1]	255[1]
Vader	169	172	172	171	183[1]
Winlock	439	442	437	446	453
LINCOLN	4,336	4,431	4,493	4,538	4,582
Unincorporated	1,730	1,769	1,809	1,852	1,888
Incorporated	2,606	2,662	2,684	2,686	2,694
Almira	166[1]	168[1]	170	168	168
Creston	139[1]	148	149	144	144
Davenport	680	678	682	689	699
Harrington	236	239	240	238	238
Odessa	472	487[1]	490	485	483[1]
Reardan	208	211	213	213	213
Sprague	232	234	242	231	231[1]
Wilbur	473	497	498	518	518
MASON	17,532	18,076	18,626	19,175	19,666
Unincorporated	14,464	14,982	15,499	16,027	16,514
Incorporated	3,068	3,094	3,127	3,148	3,152
Shelton	3,068	3,094	3,127	3,148	3,152
OKANOGAN	13,599	13,878	14,159	14,459	14,744
Unincorporated	7,386	7,582	7,867	8,126	8,417
Incorporated	6,213	6,296	6,292	6,333	6,327
Brewster	604	607	599	629	624
Conconully	119	120	120	126	122[1]
Coulee Dam (Part)	471[1]	487[1]	489[1]	468[1]	463[1]
Elmer City	139	143	143	142	138[1]
Nespelem	106	110	111	113	110
Okanogan	970	984[1]	990	991	986
Omak	1,714	1,725	1,710	1,701	1,701
Oroville	692	704	709	717	729
Pateros	256	262	257	258	261
Riverside	102	102	102	102	105[1]
Tonasket	403	405	417	448	448
Twisp	421	420	417	413	411
Winthrop	216	227	228	225	229
PACIFIC	10,949	11,162	11,414	11,568	11,817
Unincorporated	7,733	7,935	8,127	8,279	8,324
Incorporated	3,216	3,227	3,287	3,289	3,493
Ilwaco	320[1]	320	330	333	322[1]
Long Beach	869[1]	863	920	915	1,089
Raymond	1,285	1,292	1,285	1,285	1,326
South Bend	742	752	752	756	756
PEND OREILLE	4,688	4,822	4,864	4,955	5,053
Unincorporated[3]	3,355	3,478	3,579	3,666	3,762
Incorporated	1,333	1,344	1,285	1,289	1,291
Cusick	103	104	105	107	105[1]
Ione	237	237	235	235	235
Metaline	95	95	93	91	94
Metaline Falls	191	191	190	190	190
Newport	707	717	662[1]	666	667
PIERCE	187,443	191,081	193,652	196,921	200,413
Unincorporated	98,533	100,152	101,988	104,080	106,645
Incorporated	88,910	90,929	91,664	92,841	93,768
Bonney Lake	1,875	2,025	2,118	2,184	2,321
Buckley	886	901	930	971	1,036
Carbonado	154	154	158	158	158
Du Pont	226	213[1]	213	213	220[1]
Eatonville	412	428	436	453	471
Fife	844	1,033	1,173	1,173	1,192

	1980[2]	1981	1982	1983	1984
PIERCE (cont)					
Fircrest	2,057	2,063	2,064	2,064	2,067
Gig Harbor	1,187	1,191	1,222	1,242	1,254
Milton (Part)	1,091	1,096	1,096	1,199	1,212
Orting	624	634	634	638	640
Puyallup	7,018	7,228	7,258	7,324	7,428
Roy	161	165	167	123[1]	140
Ruston	300[1]	300	301	299	299
South Prairie	74	73	78	81	84
Steilacoom	1,949	1,969	1,979	2,047	2,052
Sumner	2,149	2,252	2,288	2,306	2,345
Tacoma	67,759	69,063	69,409	70,222	70,706
Wilkeson	144	141[1]	140	144	143
SAN JUAN	5,310	5,612	5,912	5,804	5,886
Unincorporated	4,692	4,986	5,275	5,158	5,230
Incorporated	618	626	637	646	656
Friday Harbor	618	626	637	646	656
SKAGIT	27,775	28,268	28,786	29,142	29,696
Unincorporated[3]	13,488	13,698	13,927	14,094	14,319
Incorporated	14,287	14,570	14,859	15,048	15,377
Anacortes	3,917	4,037	4,100	4,149	4,261
Burlington	1,668	1,675	1,686	1,690	1,728
Concrete	257	255	255	255	255
Hamilton	116	107	101	98	97
La Conner	314[1]	314	312	313	299
Lyman	124	121	125	126	125
Mount Vernon	5,494	5,626	5,803	5,938	6,117
Sedro Woolley	2,397	2,435	2,477	2,479	2,495
SKAMANIA	3,435	3,426	3,485	3,546	3,599
Unincorporated	2,774	2,772	2,837	2,889	2,962
Incorporated	661	654	648	657	637
N. Bonneville	183[1]	179[1]	174[1]	183[1]	170[1]
Stevenson	478	475	474	474	467
SNOHOMISH	131,206	136,168	140,397	142,849	146,576
Unincorporated[3]	68,994	70,452	73,670	75,230	76,070
Incorporated	62,212	65,716	66,727	67,619	70,506
Arlington	1,299	1,300	1,325	1,325	1,331
Bothell (Part)	0	0	3	6	13
Brier	946	1,016	1,042	1,073	1,208
Darrington	436	453	454	436	426[1]
Edmonds	10,706	11,023	11,002	11,210	11,620
Everett	23,912	25,009	25,422	25,583	25,848
Gold Bar	423	441	457	476	489
Granite Falls	377	387	381	385	395
Index	106	100	98	100	90[1]
Lake Stevens	643	656	675	680	695
Lynnwood	9,220	9,516	9,584	9,826	9,936[1]
Marysville	2,607	2,647[1]	2,922	2,951	2,989
Mill Creek	–	–	–	–	1,489[1]
Monroe	1,193	1,269	1,274	1,286	1,320
Mountlake Terr.	6,150	6,210	6,311	6,409	6,500
Mukilteo	574	2,030	2,047	2,061	2,277[1]
Snohomish	2,075	2,092	2,153	2,186	2,193
Stanwood	617	624	625	630	638[1]
Sultan	654	670	674	713[1]	761
Woodway	274	273	278	283	288
SPOKANE	137,673	139,157	140,683	141,652	143,165
Unincorporated	55,128	55,976	56,838	57,469	58,553
Incorporated	82,545	83,181	83,845	84,183	84,612
Airway Hts.	762	786	792	899	879
Cheney	2,601	2,608	2,638	2,556[1]	2,587
Deer Park	871	879	903	929	945
Fairfield	225	232	238	235	235
Latah	83	85	86	82[1]	82[1]
Medical Lake	904	919	927	922	934
Millwood	728	727	726	728	727
Rockford	177	177	177	177	177
Spangle	110	112	110	104	107[1]
Spokane	76,041	76,611	77,201	77,505	77,891
Waverly	43	45	47[1]	46	48[1]
STEVENS	12,550	12,844	13,077	13,251	13,550
Unincorporated	9,028	9,240	9,487	9,637	9,859
Incorporated	3,522	3,604	3,590	3,614	3,691
Chewelah	820[1]	876[1]	867[1]	864	881
Colville	1,897[1]	1,894	1,911	1,915	1,943
Kettle Falls	443	464	463[1]	483	510
Marcus	62	62	62	60	63
Northport	186[1]	194[1]	180[1]	189[1]	179[1]
pringdale	114	114	107	103	115[1]
THURSTON	50,712	52,093	53,337	54,695	56,217
Unincorporated[3]	27,899	28,728	29,710	30,514	31,550
Incorporated	22,813	23,365	23,627	24,181	24,667
Bucoda	213	214	215	218	217

TABLE 2 (Cont.)

HOUSING UNITS FOR CITIES, TOWNS AND COUNTIES
STATE OF WASHINGTON
1980-1984

	1980[2]	1981	1982	1983	1984
THURSTON (cont)					
Lacey	5,838	6,058	6,087	6,124	6,296
Olympia	12,565	12,750	12,839	13,196	13,365
Rainier	305	354	350[1]	350	348
Tenino	502	524	525	510	536
Tumwater	2,920	2,953	3,098	3,263	3,383
Yelm	470	512	513	520	522
WAHKIAKUM	1,504	1,514	1,542	1,553	1,557
Unincorporated	1,245	1,255	1,283	1,295	1,299
Incorporated	259	259	259	258	258
Cathlamet	259	259	259	258	258
WALLA WALLA	18,138	18,247	18,442	18,550	18,806
Unincorporated[3]	5,368	5,370	5,406	5,457	5,525
Incorporated	12,770	12,877	13,036	13,093	13,281
College Place	1,987	2,029	2,117	2,143	2,231[1]
Prescott	148	153[1]	149[1]	153[1]	155[1]
Waitsburg	462	478	479	482	487
Walla Walla	10,173	10,217	10,291	10,315	10,408
WHATCOM	47,479	48,384	49,192	49,703	50,390
Unincorporated[3]	22,770	23,281	23,874	24,002	24,428
Incorporated	24,709	25,103	25,318	25,701	25,962
Bellingham	19,750	20,000	20,072	20,170	20,238
Blaine	1,071	1,070	1,067	1,098	1,107
Everson	376	399	412	437	471
Ferndale	1,465	1,550	1,606	1,801	1,835
Lynden	1,573	1,610	1,688	1,714	1,809
Nooksack	158	158	158	165[1]	187
Sumas	316	316[1]	315[1]	316[1]	315[1]
WHITMAN	14,418	14,520	14,679	14,768	14,693
Unincorporated[3]	3,101	3,120	3,165	3,197	3,223
Incorporated	11,317	11,400	11,514	11,571	11,470
Albion	276	283	284	288	287
Colfax	1,256	1,259	1,260	1,257	1,264
Colton	128	128	128	130	128
Endicott	167	168[1]	169[1]	169	169[1]
Farmington	74	74	74	75	75
Garfield	295	283[1]	279	281	279
La Crosse	182	181[1]	187[1]	184[1]	184[1]
Lamont	35	35	33	34	34[1]
Malden	107[1]	107	107	106	106
Oakesdale	200	199	199	200	201
Palouse	448	451	455	444	438[1]
Pullman	7,142	7,208	7,302	7,373	7,264
Rosalia	253	261	261	260	253
St. John	253[1]	254[1]	261[1]	263[1]	259[1]
Tekoa	365	369	370	371	365
Uniontown	136	140[1]	145	136	134[1]
YAKIMA	66,851	67,974	68,769	69,321	70,390
Unincorporated[3]	31,111	31,888	32,411	32,904	33,625
Incorporated	35,740	36,086	36,358	36,417	36,765
Grandview	2,107	2,307	2,320	2,350	2,375
Granger	621	658	662	654	655
Harrah	119	125	128	128	127
Mabton	384	392[1]	398	405	408
Moxee City	250	251	256	258	297
Naches	271[1]	277	278	278	278
Selah	1,667	1,672	1,683	1,690	1,702
Sunnyside	3,302	3,339	3,456	3,485	3,549
Tieton	234	241	258	248	248
Toppenish	2,235	2,242	2,243	2,249	2,252
Union Gap	1,335	1,342	1,346	1,333	1,334
Wapato	1,193	1,199	1,205	1,204	1,206
Yakima	21,372	21,379	21,430	21,447	21,632
Zillah	650	662	695	688	702

	1980[2]	1981	1982	1983	1984
STATE TOTAL	1,689,472	1,725,433	1,755,706	1,780,652	1,813,321
UNINCORPORATED	776,357	795,889	816,650	831,003	849,253
INCORPORATED	913,115	929,544	939,056	949,649	964,068

FOOTNOTES:

[1]Special city/town census count.
[2]1980 Federal census counts adjusted for annexations January 1, 1980 to April 1, 1980 and all federal census corrections through November 1982.
[3]Does not include changes in mobile homes/house trailers within mobile home parks for one or more years in the series.

NOTE: Total housing stock for the four Washington cities that are split between two or more counties are shown below:

	1980	1981	1982	1983	1984
Bothell	-	-	3,143	3,207	3,266
Coulee Dam	570	591	593	568	563
Milton	1,209	1,239	1,260	1,400	1,425
Woodland	890	912	974	975	977

OFM/PAF
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TABLE 3

HOUSING UNITS BY STRUCTURE TYPE
FOR CITIES, TOWNS AND COUNTIES
STATE OF WASHINGTON
1984

	Total Housing Units	One Unit Structure	Two or More Unit Structure	Mobile Homes, Trailers and Special
ADAMS	5,239	3,293	804	1,142
UNINCORPORATED	2,256	1,167	153	936
INCORPORATED	2,983	2,126	651	206
Hatton[1]	29	17	0	12
Lind	281	213	33	35
Othello	1,615	1,087	476	52
Ritzville	935	723	142	70
Washtucna	123	86	0	37
ASOTIN	7,373	5,206	1,271	896
UNINCORPORATED	3,892	2,803	437	652
INCORPORATED	3,481	2,403	834	244
Asotin[1]	388	283	60	45
Clarkston	3,093	2,120	774	199
BENTON	45,029	28,504	11,300	5,225
UNINCORPORATED[1]	10,981	7,494	867	2,620
INCORPORATED	34,048	21,010	10,433	2,605
Benton City	786	499	89	198
Kennewick	16,251	8,820	5,921	1,510
Prosser	1,667	1,208	373	86
Richland	13,785	9,554	3,861	370
W. Richland	1,559	929	189	441
CHELAN	23,636	16,360	4,777	2,499
UNINCORPORATED	12,418	8,773	1,531	2,114
INCORPORATED	11,218	7,587	3,246	385
Cashmere	994	750	200	44
Chelan	1,487	1,025	421	41
Entiat[1]	181	113	42	26
Leavenworth	724	562	162	0
Wenatchee	7,832	5,137	2,421	274
CLALLAM	23,266	16,266	3,227	3,773
UNINCORPORATED	12,949	9,127	710	3,112
INCORPORATED	10,317	7,139	2,517	661
Forks	1,122	619	259	244
Port Angeles	7,459	5,711	1,640	108
Sequim	1,736	809	618	309
CLARK	78,498	58,090	15,265	5,143
UNINCORPORATED[2]	51,932	42,070	5,395	4,467
INCORPORATED	26,566	16,020	9,870	676
Battle Ground	1,116	683	279	154
Camas	2,266	1,844	414	8
LaCenter	175	135	34	6
Ridgefield	426	370	50	6[3]
Vancouver	20,503	11,687	8,561	255
Washougal	1,823	1,126	520	177
Woodland (Part)	41	10	0	31
Yacolt	216	165	12	39
COLUMBIA	1,890	1,529	169	192
UNINCORPORATED[2]	649	499	23	127
INCORPORATED	1,241	1,030	146	65
Dayton	1,148	967	146	35
Starbuck	93	63	0	30
COWLITZ	32,742	23,261	6,882	2,599
UNINCORPORATED	12,430	9,401	946	2,083
INCORPORATED	20,312	13,860	5,936	516
Castle Rock	881	623	211	47
Kalama	494	351	126	17[3]
Kelso	4,811	3,203	1,439	169
Longview	13,190	9,109	3,830	251
Woodland (Part)	936	574	330	32
DOUGLAS	9,556	6,365	1,613	1,578
UNINCORPORATED[2]	7,380	5,041	1,072	1,267
INCORPORATED	2,176	1,324	541	311
Bridgeport	502	358	91	53
Coulee Dam (Part)[1]	99	93	6	0
E. Wenatchee[1]	827	301	378	148
Mansfield	169	126	20	23
Rock Island	167	121	0	46
Waterville[1]	412	325	46	41
FERRY	2,644	1,807	175	662
UNINCORPORATED	2,229	1,527	103	599
INCORPORATED	415	280	72	63
Republic	415	280	72	63
FRANKLIN	14,061	8,072	3,534	2,455
UNINCORPORATED[2]	5,045	3,586	285	1,174
INCORPORATED	9,016	4,486	3,249	1,281
Connell[1]	694	394	159	141
Kahlotus[1]	96	42	11	43
Mesa	112	67	12	33
Pasco	8,114	3,983	3,067	1,064
GARFIELD	1,179	892	111	176
UNINCORPORATED[2]	399	305	21	73
INCORPORATED	780	587	90	103
Pomeroy	780	587	90	103
GRANT	21,448	13,664	3,560	4,224
UNINCORPORATED	9,913	5,648	1,276	2,989
INCORPORATED	11,535	8,016	2,284	1,235
Coulee City[1]	330	238	30	62
Coulee Dam (Part)[1]	1	1	0	0
Electric City	430	327	31	72
Ephrata	2,353	1,786	430	137
George	104	47	12	45
Grand Coulee	671	380	141	150
Hartline	89	77	3	9
Krupp[1]	37	31	2	4
Mattawa[1]	200	63	30	107
Moses Lake	4,281	3,276	850	155
Quincy	1,336	836	279	221
Royal City	278	109	94	75
Soap Lake	843	460	281	102
Warden	483	308	101	74
Wilson Creek[1]	99	77	0	22
GRAYS HARBOR	29,792	20,974	5,188	3,630
UNINCORPORATED[2]	10,939	7,699	547	2,693
INCORPORATED	18,853	13,275	4,641	937
Aberdeen	8,073	5,200	2,639	234
Cosmopolis	588	533	46	9
Elma	1,085	782	299	4
Hoquiam	4,041	3,087	854	100
McCleary	632	507	114	11
Montesano	1,330	956	329	45
Oakville[1]	230	186	4	40
Ocean Shores	1,569	1,197	137	235
Westport	1,305	827	219	259
ISLAND	23,266	17,291	3,074	2,901
UNINCORPORATED	17,586	13,778	1,332	2,476
INCORPORATED	5,680	3,513	1,742	425
Coupeville[1]	559	347	139	73
Langley	391	283	107	1
Oak Harbor	4,730	2,883	1,496	351
JEFFERSON	9,779	6,834	1,342	1,603
UNINCORPORATED[2]	7,005	4,650	869	1,486
INCORPORATED	2,774	2,184	473	117
Port Townsend	2,774	2,184	473	117
KING	565,862	362,023	188,953	14,886
UNINCORPORATED[2]	201,428	155,277	37,287	8,864
INCORPORATED	364,434	206,746	151,666	6,022
Algona	608	510	37	61
Auburn	12,875	5,783	5,508	1,584
Beaux Arts	115	113	2	0
Bellevue	31,242	19,127	12,051	64
Black Diamond	482	349	31	102
Bothell (Part)	3,253	1,817	701	735
Carnation[1]	406	311	59	36
Clyde Hill	1,048	1,030	18	0
Des Moines	5,854	2,620	2,978	256[3]
Duvall[1]	362	274	51	37
Enumclaw	2,641	1,702	754	185

KING (CONTINUED)

Hunts Point	192	192	0	0
Issaquah	2,479	1,511	883	85
Kent	12,814	5,135	6,835	844
Kirkland	8,942	5,137	3,747	58
Lake Forest Pk.	925	867	56	2
Medina	1,171	1,133	38	0
Mercer Island	7,929	6,328	1,591	10
Milton (Part)	213	101	0	112
Normandy Park	2,289	1,910	378	1
North Bend	794	522	212	60
Pacific	943	600	242	101
Redmond	10,328	6,747	3,181	400
Renton	15,804	8,823	6,629	352
Seattle	237,478	132,464	104,116	898
Skykomish[1]	164	146	4	14
Snoqualmie	607	494	88	25
Tukwila	2,103	627	1,476	0
Yarrow Point[1]	373	373	0	0
KITSAP	63,565	45,188	12,983	5,394
UNINCORPORATED[1]	43,539	34,293	4,287	4,959
INCORPORATED	20,026	10,895	8,696	435
Bremerton	15,207	8,253	6,775	179
Port Orchard	2,009	1,240	693	76
Poulsbo	1,591	851	623	117
Winslow	1,219	551	605	63
KITTITAS	12,411	7,908	2,931	1,572
UNINCORPORATED[2]	5,382	3,780	441	1,161
INCORPORATED	7,029	4,128	2,490	411
Cle Elum	920	709	136	75
Ellensburg	4,954	2,485	2,278	191
Kittitas	362	220	66	76
Roslyn	584	555	7	22
S. Cle Elum	209	159	3	47
KLICKITAT	7,172	4,755	959	1,458
UNINCORPORATED[2]	4,503	2,986	367	1,150
INCORPORATED	2,669	1,769	592	308
Bingen	326	219	82	25
Goldendale	1,517	1,050	268	199
White Salmon	826	500	242	84
LEWIS	24,113	17,650	2,983	3,480
UNINCORPORATED[2]	14,205	10,473	733	2,999
INCORPORATED	9,908	7,177	2,250	481
Centralia	5,212	3,698	1,314	200
Chehalis	2,522	1,833	680	9
Morton	542	394	110	38
Mossyrock	224	153	23	48
Napavine	263	232	4	27
Pe Ell[1]	254	215	5	34
Toledo[1]	255	188	29	38
Vader[1]	183	127	3	53
Winlock	453	337	82	34
LINCOLN	4,582	3,422	381	779
UNINCORPORATED	1,888	1,332	106	450
INCORPORATED	2,694	2,090	275	329
Almira	168	137	9	22
Creston	144	86	11	47
Davenport	699	529	106	64
Harrington	238	201	19	18
Odessa[1]	483	430	21	32
Reardan	213	136	33	44
Sprague[1]	231	187	17	27
Wilbur	518	384	59	75
MASON	19,666	14,413	1,347	3,906
UNINCORPORATED	16,514	12,046	719	3,749
INCORPORATED	3,152	2,367	628	157
Shelton	3,152	2,367	628	157
OKANOGAN	14,744	10,167	1,928	2,649
UNINCORPORATED	8,417	5,558	897	1,962
INCORPORATED	6,327	4,609	1,031	687
Brewster	624	399	103	122
Conconully[1]	122	87	0	35
Coulee Dam (Part)[1]	463	390	60	13
Elmer City[1]	138	94	14	30
Nespelem	110	81	7	22
Okanogan	986	693	211	82
Omak	1,701	1,327	308	66
Oroville	729	520	146	63

OKANOGAN (CONTINUED)

Pateros	261	198	33	30
Riverside[1]	105	76	0	29
Tonasket	448	301	92	55
Twisp	411	279	47	85
Winthrop	229	164	10	55
PACIFIC	11,817	8,545	1,131	2,141
UNINCORPORATED	8,324	6,121	328	1,875
INCORPORATED	3,493	2,424	803	266
Ilwaco[1]	322	260	40	22
Long Beach	1,089	632	333	124
Raymond	1,326	963	305	58
South Bend	756	569	125	62
PEND OREILLE	5,053	3,733	432	888
UNINCORPORATED[2]	3,762	2,797	208	757
INCORPORATED	1,291	936	224	131
Cusick[1]	105	83	9	13
Ione	235	164	18	53
Metaline	94	82	0	12
Metaline Falls	190	100	83	7
Newport	667	507	114	46
PIERCE	200,413	136,822	50,627	12,964
UNINCORPORATED	106,645	71,627	22,851	12,167
INCORPORATED	93,768	65,195	27,776	797
Bonney Lake	2,321	1,779	67	475
Buckley	1,036	839	176	21
Carbonado	158	135	7	16
Du Pont[1]	220	168	52	0
Eatonville	471	345	64	62
Fife	1,192	480	703	9
Fircrest	2,067	1,703	364	0
Gig Harbor	1,254	645	601	8
Milton (Part)	1,212	1,054	145	13
Orting	640	552	78	10
Puyallup	7,428	5,974	1,404	50
Roy	140	103	8	29[3]
Ruston	299	239	60	0
South Prairie	84	74	0	10
Steilacoom	2,052	1,360	692	0
Sumner	2,345	1,419	879	47
Tacoma	70,706	48,196	22,476	34
Wilkeson	143	130	0	13
SAN JUAN	5,886	4,699	724	463
UNINCORPORATED	5,230	4,277	545	408
INCORPORATED	656	422	179	55
Friday Harbor	656	422	179	55[3]
SKAGIT	29,696	22,381	4,699	2,616
UNINCORPORATED[2]	14,319	11,110	1,159	2,050
INCORPORATED	15,377	11,271	3,540	566
Anacortes	4,261	3,440	734	87
Burlington	1,728	1,255	431	42
Concrete	255	231	20	4
Hamilton	97	77	14	6
La Conner	299	230	53	16
Lyman	125	116	2	7
Mount Vernon	6,117	3,961	1,850	306
Sedro Woolley	2,495	1,961	436	98
SKAMANIA	3,599	2,516	318	765
UNINCORPORATED	2,962	2,087	161	714
INCORPORATED	637	429	157	51
N. Bonneville[1]	170	116	18	36
Stevenson	467	313	139	15
SNOHOMISH	146,576	101,767	31,382	13,427
UNINCORPORATED[2]	76,076	58,839	6,156	11,075
INCORPORATED	70,506	42,928	25,226	2,352
Arlington	1,331	832	396	103
Bothell (Part)	13	13	0	0
Brier	1,208	1,185	17	6
Darrington[1]	426	339	14	73
Edmonds	11,620	7,751	3,759	110
Everett	25,848	14,747	10,339	762
Gold Bar	489	287	31	171
Granite Falls	395	284	79	32
Index[1]	90	88	0	2
Lake Stevens	695	562	133	0
Lynnwood[1]	9,936	4,795	4,581	560
Marysville	2,989	1,554	1,213	222[3]
Mill Creek[1]	1,489	818	670	1
Monroe	1,320	828	480	12
Mountlake Terrace	6,500	4,731	1,666	103

SNOHOMISH (CONTINUED)				
Mukilteo[1]	2,277	1,355	912	10
Snohomish	2,193	1,491	670	32
Stanwood[1]	638	477	159	2
Sultan	761	503	107	151
Woodway	288	288	0	0
SPOKANE	143,165	100,428	33,843	8,894
UNINCORPORATED	58,553	43,106	8,581	6,866
INCORPORATED	84,612	57,322	25,262	2,028
Airway Hts.	879	335	187	357
Cheney	2,587	1,194	1,242	151
Deer Park	945	643	168	134
Fairfield	235	175	33	27
Latah[1]	82	74	2	6
Medical Lake	934	593	235	106
Millwood	727	639	81	7
Rockford	177	140	6	31
Spangle[1]	107	75	6	26
Spokane	77,891	53,424	23,302	1,165
Waverly[1]	48	30	0	18
STEVENS	13,550	9,998	1,219	2,333
UNINCORPORATED	9,859	7,355	561	1,943
INCORPORATED	3,691	2,643	658	390
Chewelah	881	603	162	116
Colville	1,943	1,365	397	181
Kettle Falls	510	376	91	43
Marcus	63	55	3	5
Northport[1]	179	159	5	15
Springdale[1]	115	85	0	30
THURSTON	56,217	36,518	12,229	7,470
UNINCORPORATED[2]	31,550	21,369	3,891	6,290
INCORPORATED	24,667	15,149	8,338	1,180
Bucoda	217	184	0	33
Lacey	6,296	3,657	2,397	242
Olympia	13,365	8,301	4,536	528
Rainier	348	211	23	114
Tenino	536	410	97	29
Tumwater	3,383	1,983	1,180	220
Yelm	522	403	105	14
WAHKIAKUM	1,557	1,280	109	168
UNINCORPORATED	1,299	1,074	58	167
INCORPORATED	258	206	51	1
Cathlamet	258	206	51	1
WALLA WALLA	18,806	12,890	4,318	1,598
UNINCORPORATED[2]	5,525	4,272	474	779
INCORPORATED	13,281	8,618	3,844	819
College Place[1]	2,231	1,096	911	224
Prescott[1]	155	68	2	85
Waitsburg	487	375	19	93
Walla Walla	10,408	7,079	2,912	417
WHATCOM	50,390	35,301	10,622	4,467
UNINCORPORATED[2]	24,428	18,660	2,041	3,727
INCORPORATED	25,962	16,641	8,581	740
Bellingham	20,238	12,615	7,132	491
Blaine	1,107	712	337	58
Everson	471	312	121	38
Ferndale	1,835	1,212	513	110
Lynden	1,809	1,378	421	10
Nooksack	187	179	0	8
Sumas[1]	315	233	57	25
WHITMAN	14,693	8,003	5,378	1,312
UNINCORPORATED[2]	3,223	2,716	216	291
INCORPORATED	11,470	5,287	5,162	1,021
Albion	287	154	18	115
Colfax	1,264	774	406	84
Colton	128	107	8	13
Endicott[1]	169	149	0	20
Farmington	75	73	0	2
Garfield	279	182	37	60
La Crosse[1]	184	142	13	29
Lamont[1]	34	27	0	7
Malden	106	101	0	5
Oakesdale	201	171	9	21
Palouse[1]	438	322	42	74
Pullman	7,264	2,253	4,566	445
Rosalia	263	217	18	28
St. John[1]	259	203	12	44
Tekoa	385	318	27	40
Uniontown[1]	134	94	6	34
YAKIMA	70,390	50,221	12,674	7,495
UNINCORPORATED[2]	33,625	24,730	3,251	5,644
INCORPORATED	36,765	25,491	9,423	1,851
Grandview	2,375	1,634	372	369
Granger	655	461	110	84
Harrah	127	100	13	14
Mabton	408	320	37	51
Moxee City	297	235	59	3
Naches	278	227	7	44
Selah	1,702	1,221	441	40
Sunnyside	3,549	2,375	894	280
Tieton	248	207	23	18
Toppenish	2,252	1,825	369	58
Union Gap	1,334	841	117	376
Wapato	1,206	918	278	10
Yakima	21,632	14,629	6,576	427
Zillah	702	498	127	77
STATE TOTAL	1,813,321	1,229,036	444,462	139,823
UNINCORPORATED	849,253	629,453	110,885	108,915
INCORPORATED	964,068	599,583	333,577	30,908

NOTE: Total housing units by structure type, for the four Washington cities that are split between two or more counties are shown below:

	Total Housing Units	One Unit Structure	Two or More Unit Structure	Mobile Homes, Trailers and Special
Bothell	3,266	1,830	701	735
Coulee Dam	563	484	66	13
Milton	1,425	1,155	145	125
Woodland	977	584	330	63

[1]Special city/town census count.

[2]Does not include changes in mobile homes/house trailers in mobile home parks.

[3]The number of special unit structures are as follows: Kalama (4), Des Moines (11), Roy (1), Friday Harbor (10), Marysville (3), and Ridgefield (22).

TABLE 4

ADJUSTED ESTIMATES OF THE POPULATION 65 YEARS AND OVER BY COUNTY STATE OF WASHINGTON 1970–1984[1]

	Corrected Census 1970[2]	1971	1972	1973	1974	1975	1976	1977	1978	1979	Census 1980	1981	1982	1983	1984
STATE TOTAL	327,160	334,560	341,900	350,480	359,380	368,510	378,550	391,420	404,360	418,340	431,562	444,910	457,480	471,040	484,570
Adams	870	880	1,000	1,080	1,100	1,120	1,160	1,160	1,100	1,120	1,154	1,190	1,250	1,280	1,300
Asotin	1,970	1,990	2,010	2,030	2,050	2,100	2,180	2,200	2,270	2,320	2,398	2,460	2,540	2,620	2,690
Benton	4,460	4,710	4,920	5,250	5,450	5,710	5,940	6,270	6,560	6,850	7,219	7,660	7,980	8,220	8,450
Chelan	5,320	5,360	5,470	5,710	5,900	6,020	6,170	6,260	6,540	6,650	6,828	7,070	7,180	7,410	7,640
Clallam	4,440	4,610	4,800	5,020	5,240	5,480	5,760	6,110	6,490	6,890	7,312	7,640	7,950	8,170	8,400
Clark	11,820	12,210	12,630	13,020	13,490	14,040	14,650	15,370	16,100	16,770	17,379	18,080	18,800	19,360	19,900
Columbia	680	680	670	700	700	700	710	710	710	720	727	750	760	780	800
Cowlitz	6,090	6,300	6,480	6,770	6,980	7,250	7,460	7,780	8,090	8,390	8,611	8,840	9,070	9,350	9,630
Douglas	1,530	1,620	1,710	1,790	1,800	1,870	1,930	2,020	2,090	2,180	2,265	2,310	2,370	2,440	2,500
Ferry	320	330	320	330	350	380	400	440	470	480	490	530	550	560	580
Franklin	1,720	1,800	1,820	1,900	2,020	2,160	2,220	2,320	2,450	2,570	2,661	2,800	2,920	3,010	3,110
Garfield	370	360	350	330	340	350	360	360	390	410	415	440	450	460	480
Grant	2,940	3,080	3,200	3,290	3,420	3,620	3,810	4,080	4,290	4,540	4,754	5,040	5,240	5,390	5,550
Grays Harbor	6,900	6,930	7,020	7,120	7,240	7,310	7,460	7,610	7,820	8,130	8,396	8,650	8,820	9,090	9,360
Island	2,520	2,640	2,940	3,150	3,370	3,650	3,770	3,980	4,260	4,580	4,821	5,180	5,480	5,630	5,780
Jefferson	1,440	1,500	1,550	1,630	1,740	1,840	1,940	2,050	2,240	2,380	2,518	2,660	2,780	2,860	2,940
King	103,400	105,480	107,430	109,570	112,210	114,330	116,720	119,880	122,800	126,080	129,414	132,780	136,420	140,440	144,450
Kitsap	10,150	10,530	10,830	11,140	11,480	11,780	12,220	12,820	13,390	13,980	14,529	15,030	15,420	15,890	16,360
Kittitas	2,310	2,330	2,350	2,420	2,470	2,500	2,580	2,610	2,680	2,830	2,942	2,970	3,110	3,210	3,310
Klickitat	1,410	1,420	1,440	1,460	1,500	1,560	1,650	1,750	1,810	1,880	1,943	2,020	2,070	2,140	2,200
Lewis	6,300	6,320	6,370	6,420	6,520	6,680	6,810	7,080	7,260	7,500	7,623	7,890	7,970	8,200	8,440
Lincoln	1,430	1,480	1,500	1,500	1,520	1,510	1,540	1,590	1,610	1,610	1,615	1,620	1,640	1,690	1,740
Mason	2,540	2,580	2,650	2,790	2,830	2,970	3,120	3,300	3,520	3,650	3,934	4,180	4,410	4,530	4,660
Okanogan	2,950	3,020	3,120	3,180	3,270	3,330	3,450	3,540	3,620	3,730	3,870	4,010	4,060	4,170	4,280
Pacific	2,460	2,500	2,520	2,550	2,590	2,610	2,690	2,720	2,780	2,850	2,968	3,050	3,140	3,200	3,260
Pend Oreille	850	850	870	890	900	910	920	930	960	980	1,034	1,060	1,050	1,080	1,110
Pierce	34,460	35,380	36,180	37,020	37,800	38,710	39,670	41,100	42,540	44,140	45,530	46,870	48,230	49,760	51,280
San Juan	780	810	850	880	900	960	1,010	1,100	1,180	1,260	1,341	1,420	1,480	1,520	1,560
Skagit	6,600	6,740	6,760	6,940	7,190	7,390	7,610	7,960	8,230	8,500	8,782	9,110	9,390	9,650	9,920
Skamania	520	540	580	610	600	600	620	660	700	740	759	790	800	830	860
Snohomish	19,930	20,610	21,100	21,830	22,620	23,360	24,380	25,650	26,880	28,270	29,532	30,840	31,810	32,780	33,750
Spokane	32,450	33,080	33,540	34,090	34,640	35,360	36,020	36,680	37,520	38,530	39,453	40,320	41,200	42,390	43,570
Stevens	2,270	2,360	2,350	2,350	2,400	2,470	2,550	2,670	2,720	2,860	2,966	3,040	3,170	3,260	3,360
Thurston	7,790	8,120	8,440	8,820	9,180	9,560	9,980	10,580	11,050	11,720	12,230	12,710	13,210	13,600	13,990
Wahkiakum	460	480	470	480	490	500	500	500	520	520	534	560	570	580	600
Walla Walla	5,500	5,540	5,650	5,770	5,860	5,960	5,990	6,100	6,230	6,300	6,446	6,520	6,640	6,840	7,030
Whatcom	9,760	9,640	9,850	10,100	10,330	10,490	10,610	10,910	11,230	11,650	11,967	12,310	12,600	12,980	13,350
Whitman	3,050	3,040	3,040	3,050	3,040	3,040	3,050	3,100	3,180	3,210	3,281	3,340	3,380	3,470	3,560
Yakima	16,400	16,710	17,120	17,500	17,850	18,330	18,940	19,470	20,080	20,570	20,921	21,170	21,570	22,200	22,820

[1]This series of estimates corrects for the coverage errors in the 1970 census, and will not match previously published estimates of the population aged 65 years and over.
[2]1970 census population aged 65 years and over corrected for coverage errors. A state level adjustment factor was used to correct 1970 census county population as more detailed correction factors were not available. The state correction factor was developed from series SOR 31-WCF-1 BACF-1 described in Demographic Estimates of the Coverage of the Population of States in the 1970 Census: Demographic Analysis, Current Population Reports, series P-23, No. 65, released by the Bureau of the Census in a memorandum to Federal-State Cooperative Program members, April 6, 1983.

OFM/PAF
8/84

TABLE 5

INSTITUTIONAL RESIDENT POPULATION ON
APRIL 1 BY COUNTY[1]
STATE OF WASHINGTON 1970-1984

	1970	1971	1972	1973[2]	1974	1975	1976	1977	1978[2]	1979[2]	1980	1981	1982	1983	1984
STATE TOTAL	13,039	12,148	11,337	10,247	9,063	9,546	10,475	10,571	10,341	9,866	9,351	8,791	9,834	10,706	11,431
ADAMS															
ASOTIN															
BENTON							17	11	10	14	12	15	14	17	16
CHELAN															
CLALLAM	71	54	65	43				75	90	102	105	138	193	232	261
CLARK	549	527	451	439	415	437	464	464	449	428	412	371	365	404	413
COLUMBIA															
COWLITZ															
DOUGLAS	11	9	13	7	7	8	11	14	10	12	14	14	15	16	12
FERRY															
FRANKLIN															
GARFIELD															
GRANT	11	9	10	7	9	16	12	11	8	10	12	11	16	16	11
GRAYS HARBOR															
ISLAND															
JEFFERSON	140	88													
KING	996	869	772	636	625	666	690	718	677	629	675	742	761	747	7[illegible]
KITSAP	450	417	391	390	286	352	326	356	367	347	354	363	356	373	372
KITTITAS															
KLICKITAT															
LEWIS	315	314	271	236	197	276	293	256	232	205	289	311	323	261	256
LINCOLN															
MASON	693	676	708	675	703	731	772	784	635	750	830	974	1,045	1,160	1,638
OKANOGAN															
PACIFIC	109	117	98	113	112	131	143	115	97	89	107	92	107	101	96
PEND OREILLE															
PIERCE	4,571	4,289	4,156	3,895	3,494	3,412	3,863	3,715	3,636	3,087	2,547	2,004	2,450	2,842	3,073
SAN JUAN															
SKAGIT	687	654	659	303							91	121	119	126	117
SKAMANIA															
SNOHOMISH	745	737	687	682	673	736	834	927	988	1,136	1,081	1,059	1,161	1,151	1,229
SPOKANE	2,008	1,784	1,675	1,560	1,383	1,346	1,316	1,210	1,192	1,139	1,159	1,159	1,116	1,145	1,200
STEVENS	57	52	38	48											
THURSTON	76	71	57	72	79	103	121	103	99	58	76	90	88	122	121
WAHKIAKUM															
WALLA WALLA	1,351	1,304	1,118	989	933	1,183	1,464	1,664	1,701	1,710	1,439	1,175	1,544	1,831	1,730
WHATCOM															
WHITMAN															
YAKIMA	199	177	168	152	147	149	149	148	150	150	148	152	161	162	163

[1]Resident population in state and federal mental and penal institutions. Includes veteran's homes, schools for the deaf, blind, and retarded. Data excludes persons in adult correction work release facilities, diagnostic centers, and group homes.
[2]March 1 data.

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Figure 1

POPULATION DISTRIBUTION BY SELECTED AGE GROUPS 1980 and 1984

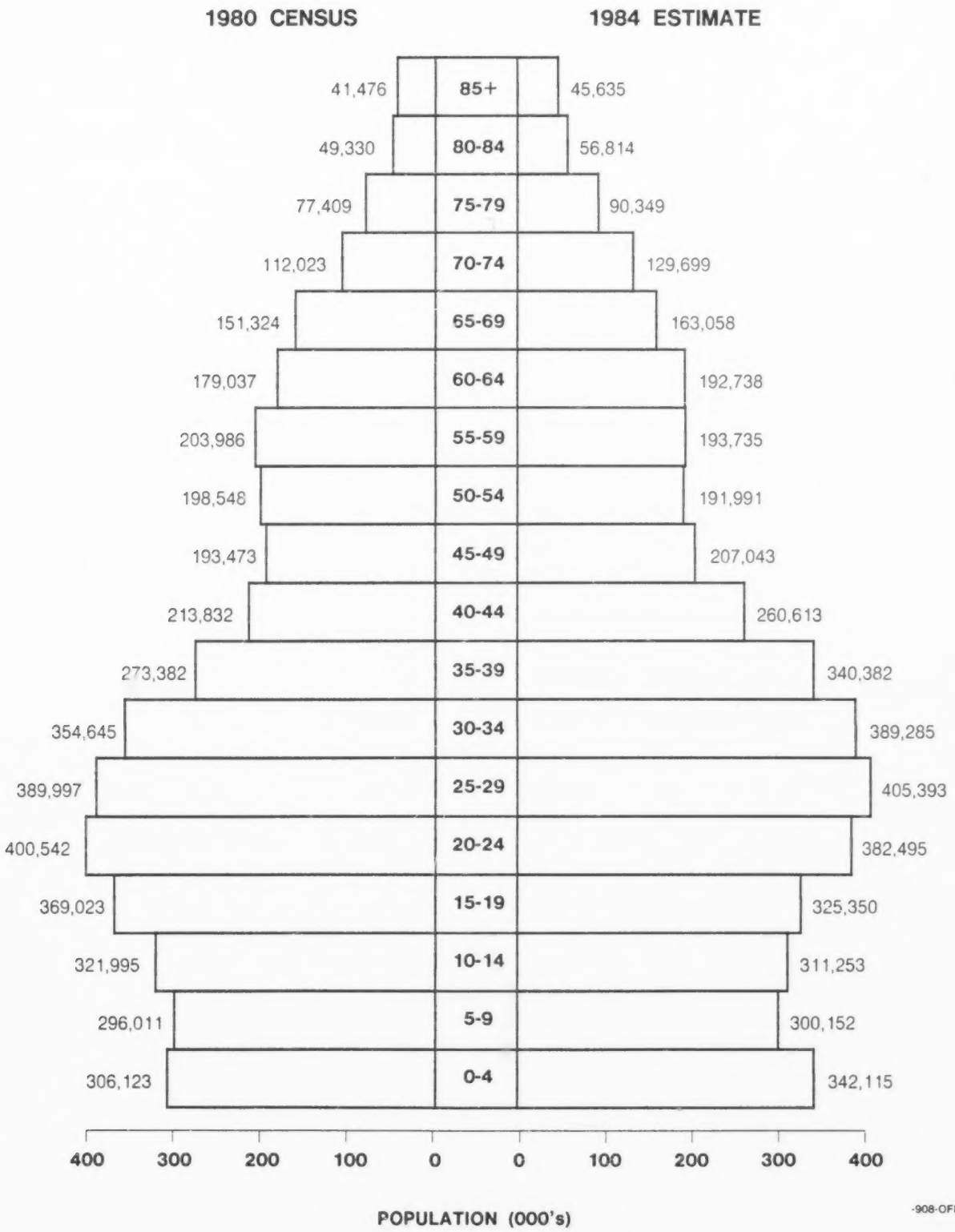

TABLE 6

POPULATION CHANGE BY BUREAU OF THE CENSUS RACIAL CATEGORIES[1] AND FOR PERSONS OF SPANISH ORIGIN STATE OF WASHINGTON 1970-80, 1980-83

			1970-80 Change			1980-83 Change	
	1970[2]	1980[3]	Number	Percent	1983	Number	Percent
Total Population	3,413,250	4,132,156	718,906	21.1	4,285,100	152,944	3.7
White	3,226,593	3,779,170	552,577	17.1	3,883,824	104,654	2.8
Non-White	186,657	352,986	166,329	89.1	401,276	48,290	13.9
Black	71,419	105,574	34,155	47.8	117,916	12,342	11.7
Indian	34,271	60,804	26,533	77.4	65,109	4,305	7.1
Asian	45,103	110,052	64,949	144.0	136,399	26,347	23.9
Other	35,864	76,556	40,692	113.5	81,852	5,296	6.9
Spanish Origin[4]	57,358	120,016	62,658	109.2	127,094	7,078	5.9

[1]Specific populations included in each racial category are shown below:
White: Peoples of Europe, North Africa, and Middle East
Black: Negro, African, Black Puerto Rican, West Indian
Indian: American Indian
Asian: Japanese, Chinese, Filipino, Korean, Hawaiian, Asian Indians, South East Asians, Vietnamese, Pacific Islanders, Guamanian, Samoan
Other: Cuban, Puerto Rican, Mexican, Dominican, Central and South American. The Other Races category is primarily a count of persons who marked "Other Race" on the 1980 census questionnaire and wrote in entries such as Cuban, Puerto Rican, Latino, Mexican, Dominican, etc. They represent persons who, when given an opportunity to identify themselves in a racial category, did not select White (or any other category provided), but specifically identified themselves as being Mexican, Puerto Rican, Latino, etc. In 1980 this category represented a tabulation of 67,154 Spanish persons who considered themselves racially Spanish and some 9,402 additional responses that could not be elsewhere classified.

[2]Census definitions used to tabulate the population by race changed in 1980. 1970 census counts have been adjusted to match 1980 counts.

[3]1980 Federal Bureau of the Census Summary Tape File 1(STF1) total counts.

[4]Spanish Origin is not a race category; it may be viewed as a nationality group. Persons of Spanish Origin may be of any race and are counted in the racial categories shown. In 1980, 44.4 percent of the persons who indicated they were of Spanish Origin identified themselves as being racially White; 47.6 percent selected the Other Races category. Very small percentages identified themselves as being Black (1.3 percent), Indian (2.3 percent) or Asian (4.4 percent).

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TABLE 7

1980 CENSUS COUNTS AND 1983 POPULATION ESTIMATES
BY BUREAU OF THE CENSUS RACIAL CATEGORIES
AND FOR THE SPANISH ORIGIN
POPULATION BY COUNTY
STATE OF WASHINGTON

	Total		White		Black		Indian		Asian		Other Races[1]		Spanish Origin[2]	
	1980[3]	1983	1980[3]	1983	1980[3]	1983	1980[3]	1983	1980[4]	1983	1980[4]	1983	1980[3]	1983[5]
Washington	4,132,156	4,285,100	3,779,170	3,883,824	105,574	117,916	60,804	63,109	110,052	136,399	76,556	81,852	120,016	127,094
Adams	13,267	13,600	11,339	11,679	36	44	61	53	70	76	1,761	1,748	2,953	2,956
Asotin	16,823	16,800	16,514	16,470	20	17	165	173	62	66	62	74	157	164
Benton	109,444	108,700	103,107	101,524	857	945	779	877	1,693	2,041	3,008	3,313	4,598	4,842
Chelan	45,061	46,500	43,701	44,731	47	39	358	388	215	279	740	1,063	1,368	1,670
Clallam	51,648	52,200	48,674	48,941	114	139	2,113	2,285	443	545	304	290	647	643
Clark	192,227	200,000	184,827	190,719	1,682	2,098	1,521	1,921	2,347	3,323	1,650	1,939	3,059	3,327
Columbia	4,057	4,000	3,937	3,852	0	0	29	34	19	20	72	94	113	132
Cowlitz	79,548	79,300	76,964	76,653	191	210	964	887	851	955	578	595	1,067	1,068
Douglas	22,144	22,400	21,538	21,653	20	24	178	152	97	127	311	444	652	763
Ferry	5,811	6,100	4,759	4,975	32	37	983	1,045	6	13	31	30	61	63
Franklin	35,025	36,000	30,025	30,051	1,452	1,586	234	264	439	566	2,875	3,533	5,412	6,034
Garfield	2,468	2,400	2,451	2,384	0	0	2	2	10	7	5	7	6	7
Grant	48,322	49,100	43,684	43,856	529	616	423	466	534	605	3,342	3,557	5,469	5,655
Grays Harbor	66,314	65,800	63,108	62,575	77	92	2,293	2,210	480	560	356	363	870	870
Island	44,048	47,000	41,049	43,779	677	645	380	471	1,398	1,541	544	564	1,124	1,192
Jefferson	15,965	16,800	15,284	16,197	40	44	440	374	104	98	97	87	204	203
King	1,269,749	1,315,800	1,122,011	1,147,059	55,950	61,505	12,437	13,437	62,459	77,083	16,892	16,716	26,631	27,364
Kitsap	147,152	161,600	135,946	148,607	2,704	3,256	2,030	2,162	4,622	5,591	1,850	1,984	3,781	4,162
Kittitas	24,877	24,900	24,096	24,043	139	120	211	218	198	247	233	272	314	330
Klickitat	15,822	16,300	14,969	15,374	19	23	467	470	110	129	257	304	474	520
Lewis	56,025	56,000	54,826	54,787	81	83	494	414	375	434	249	282	680	698
Lincoln	9,604	9,600	9,418	9,405	4	5	135	145	25	24	22	21	74	74
Mason	31,184	33,600	29,548	31,841	126	180	1,008	979	259	305	243	295	432	482
Okanogan	30,639	31,500	26,852	27,203	31	35	3,233	3,587	77	102	446	573	626	735
Pacific	17,237	17,600	16,601	16,873	35	43	357	386	123	158	121	140	172	185
Pend Oreille	8,580	8,900	8,329	8,616	6	7	192	214	19	24	34	39	102	108
Pierce	485,643	507,000	425,951	438,968	29,827	33,510	5,919	6,352	15,433	19,731	8,513	8,439	12,892	13,294
San Juan	7,838	8,700	7,702	8,544	8	9	53	63	35	47	40	37	50	54
Skagit	64,138	66,100	61,1'2	62,745	92	114	1,138	1,306	379	468	1,417	1,467	2,008	2,064
Skamania	7,919	7,800	7,751	7,631	7	6	94	98	27	24	40	41	81	80
Snohomish	337,720	360,900	323,080	343,930	2,199	2,693	4,159	4,503	5,495	7,036	2,787	2,738	5,440	5,680
Spokane	341,835	348,000	326,221	330,863	4,305	4,800	4,193	4,174	4,496	5,660	2,620	2,503	4,811	4,803
Stevens	28,979	29,700	27,165	27,781	27	34	1,504	1,596	104	128	179	161	310	304
Thurston	124,264	133,500	117,327	125,624	1,019	1,271	1,726	1,642	2,915	3,663	1,277	1,300	2,577	2,710
Wahkiakum	3,832	3,700	3,717	3,597	0	3	54	46	15	13	46	41	78	72
Walla Walla	47,435	48,200	44,051	44,383	722	897	315	388	439	520	1,908	2,012	2,572	2,670
Whatcom	106,701	112,100	100,895	105,360	328	407	3,252	3,716	926	1,193	1,300	1,424	2,065	2,208
Whitman	40,103	39,900	37,600	37,274	560	590	254	212	1,254	1,410	435	414	631	615
Yakima	172,508	177,000	143,041	143,277	1,601	1,789	6,656	7,399	1,299	1,387	19,911	22,948	25,455	28,293

NOTE: Estimates for racial and Spanish Origin categories are variable because of the small numbers involved. Caution is advised in interpreting 1980-83 change for categories of less than 500 persons.

[1]The Other Races category is primarily a count of persons who marked "Other Race" on the 1980 census questionnaire and wrote in entries such as Cuban, Puerto Rican, Latino, Mexican, Dominican, etc. They represent persons who when given an opportunity to identify themselves in a racial category did not select White (or any other category provided), but specifically identified themselves as being Mexican, Puerto Rican, Latino, etc. In 1980 this category represented a tabulation of 67,154 Spanish persons who considered themselves racially Spanish and some 9,402 additional responses that could not be elsewhere classified.

[2]Spanish Origin is not a race category; it may be viewed as a nationality group. Persons of Spanish Origin may be of any race and are counted in the racial categories shown. In 1980, 44.4 percent of the persons who indicated they were of Spanish Origin identified themselves as being racially White; 47.6 percent selected the Other Races category. Very small percentages identified themselves as being Black (1.3%), Indian (2.3%) or Asian (4.4%).

[3]1980 Federal Bureau of the Census Summary Tape File 1(STF1) total counts.

[4]1980 Federal Bureau of the Census STF1 counts with adjustments from sample count STF3 data. To expedite the processing of total count items, the U.S. Bureau of the Census did not reclassify Asian "write in" responses (e.g., Laotion, Cambodian, Fiji Islander, Pakistani), to the Asian category. Thus, total count tabulations undercount Asians and overstate Other Races. The Asian category shown includes 102,537 Asians counted in STF1 and 7,515 Asian write in responses identified by county in the processing of sample count items in STF3. The Other Races category shown represents the 84,071 Other Races tabulated in the complete count processing less the 7,515 Asian write in responses identified by county in the sample count (STF3) processing and moved to the Asian category.

[5]1983 estimates of the Spanish Origin population were developed from the 1983 estimates of the population by racial category: The 1980 number of Spanish Origin persons in each racial category was divided by racial category total (e.g., Black of Spanish Origin/total Black). These proportions were applied to the 1983 racial category estimates and summed to derive an estimate of total Spanish Origin population. It was assumed that none of the Asian write in responses temporarily tabulated in the Other Races category in STF1 identified themselves being of Spanish Origin.

COMPONENTS OF POPULATION CHANGE

TABLE 8

COMPONENTS OF POPULATION CHANGE
STATE OF WASHINGTON
1920-1984

(FIGURES IN THOUSANDS)

APRIL 1,	POPULATION	POPULATION CHANGE NUMBER	POPULATION CHANGE PERCENT	COMPONENTS OF CHANGE FROM PREVIOUS PERIOD: BIRTHS NUMBER[2]	BIRTHS RATE[3]	DEATHS NUMBER[2]	DEATHS RATE[3]	NATURAL INCREASE NUMBER	NET MIGRATION NUMBER[2]	NET MIGRATION RATE[3]
Ten Year Intervals										
1910	1,141.9	-	-	19.9	-	11.5	-	8.4	-	-
1920	1,356.6	214.6	18.8	227.7	182.2	122.4	98.0	105.3	109.3	87.6
1930	1,568.0	211.4	15.6	248.2	169.8	151.1	103.4	97.1	114.3	78.1
1940	1,736.2	168.2	10.7	233.6	141.4	176.9	107.1	56.7	111.5	67.5
1950	2,379.0	642.8	37.0	452.5	219.9	211.6	102.8	240.9	401.9	195.3
1960	2,853.2	474.2	19.9	625.9	239.3	241.9	92.4	384.0	90.2	34.5
1970	3,413.2	560.0	19.6	588.5	187.8	283.0	90.3	305.5	254.5	81.2
1980	4,132.2	719.0	21.1	547.6	145.1	302.1	80.1	245.5	473.5	125.5
Single Years										
1950	2,379.0	-	-	-	-	-	-	-	-	-
1951	2,424.0	45.0	1.9	56.0	23.3	22.8	9.5	33.2	11.8	4.9
1952	2,448.0	24.0	1.0	58.4	24.0	22.8	9.4	35.6	-11.6	-4.8
1953	2,466.0	18.0	0.7	61.9	25.2	23.2	9.4	38.8	-20.8	-8.5
1954	2,516.0	50.0	2.0	61.8	24.8	23.1	9.3	38.7	11.3	4.6
1955	2,604.0	88.0	3.5	62.5	24.4	23.5	9.2	39.0	49.0	19.1
1956	2,668.0	64.0	2.5	62.7	23.8	24.4	9.3	38.3	25.7	9.8
1957	2,724.0	56.0	2.1	65.1	24.2	24.3	9.0	40.9	15.1	5.6
1958	2,773.0	49.0	1.8	66.6	24.2	25.3	9.2	41.3	7.7	2.8
1959	2,821.0	48.0	1.7	65.2	23.3	25.6	9.2	39.5	8.5	3.0
1960	2,853.2	32.2	1.1	65.7	23.1	26.9	9.5	38.8	-6.6	-2.3
1961	2,897.0	43.8	1.5	65.3	22.7	25.8	9.0	39.6	4.2	1.5
1962	2,948.0	51.0	1.8	65.1	22.3	27.1	9.3	38.0	13.0	4.4
1963	2,972.0	24.0	0.8	63.9	21.6	27.2	9.2	36.7	-12.7	-4.3
1964	3,008.0	36.0	1.2	60.4	20.2	28.1	9.4	32.2	3.8	1.3
1965	3,065.0	57.0	1.9	55.9	18.4	27.3	9.0	28.6	28.4	9.4
1966	3,125.0	60.0	2.0	52.2	16.9	28.1	9.1	24.1	35.9	11.6
1967	3,229.0	104.0	3.3	52.9	16.6	28.8	9.1	24.1	79.9	25.1
1968	3,336.0	107.0	3.3	54.9	16.7	30.1	9.2	24.8	82.2	25.0
1969	3,397.0	61.0	1.8	58.0	17.2	30.6	9.1	27.4	33.6	10.0
1970	3,413.2	16.2	0.5	59.9	17.6	30.0	8.8	30.0	-13.7	-4.0
1971	3,436.3	23.1	0.7	60.0	17.5	29.8	8.7	30.3	-7.2	-2.1
1972	3,430.3	-6.0	-0.2	53.1	15.5	30.4	8.9	22.7	-28.7	-8.4
1973	3,444.3	14.0	0.4	47.7	13.9	30.4	8.8	17.3	-3.3	-1.0
1974	3,508.7	64.4	1.9	48.2	13.9	29.9	8.6	18.2	46.2	13.3
1975	3,567.9	59.2	1.7	50.1	14.2	30.3	8.6	19.8	39.4	11.1
1976	3,634.9	67.0	1.9	51.4	14.3	30.2	8.4	21.2	45.8	12.7
1977	3,715.4	80.5	2.2	54.2	14.8	29.1	7.9	25.1	55.4	15.1
1978	3,836.2	120.8	3.3	57.3	15.2	30.4	8.1	26.8	94.0	24.9
1979	3,979.2	143.0	3.7	60.2	15.4	30.2	7.7	30.0	113.0	28.9
1980	4,132.2	153.0	3.8	65.4	16.1	31.3	7.7	34.0	119.0	29.3
1981[1]	4,226.6	94.4	2.3	68.2	16.3	31.8	7.6	36.3	58.1	13.9
1982	4,264.0	37.4	0.9	70.1	16.4	31.7	7.4	38.3	-0.9	-0.2
1983	4,285.1	21.1	0.5	69.5[4]	16.2	32.3[4]	7.6	37.1	-16.0	-3.7
1984	4,328.1	43.0	1.0	69.3[4]	16.1	32.7[4]	7.6	36.6	6.4	1.5

[1] The 1981 estimate for the State was recalculated using 1980 population counts by age which were not available in the spring of 1981.
[2] Calendar year figures for 1920 to 1940, April to April figures from 1950 to present.
[3] Rates per 1,000 midpoint population; computed on unrounded numbers.
[4] Estimated.

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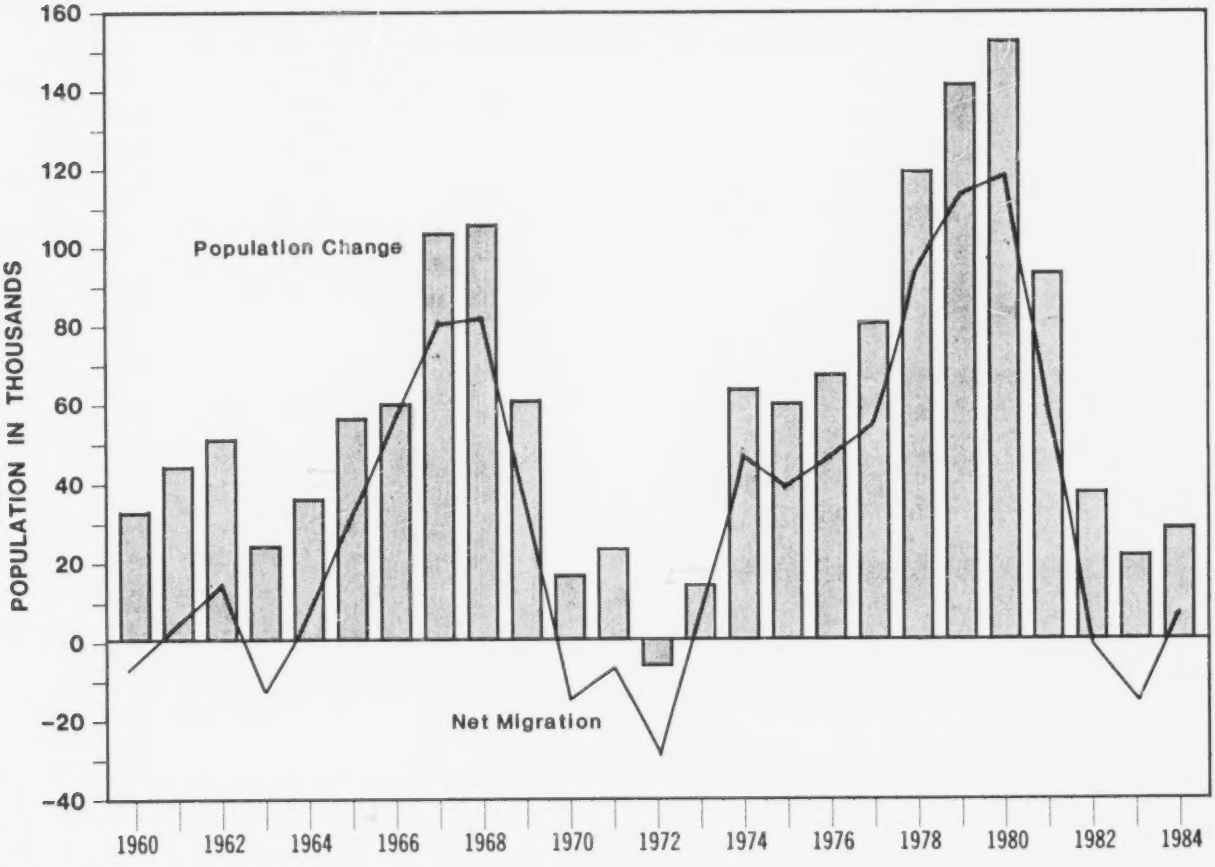
FIGURE 2

COMPARISON OF POPULATION CHANGE AND NET MIGRATION
STATE OF WASHINGTON
1960–1984



- THE COMPONENTS OF POPULATION CHANGE IN WASHINGTON REFLECT THE STATE'S ECONOMIC FLUCTUATIONS. DURING THE RAPID ECONOMIC EXPANSION OF THE LATE 1960's AND 1970's, WHEN THE ANNUAL STATE POPULATION GROWTH RATE WAS THREE PERCENT OR HIGHER, NET INMIGRATION ACCOUNTED FOR APPROXIMATELY 75 TO 80 PERCENT OF THE STATE'S POPULATION CHANGE.

- SLOWER GROWTH PERIODS ARE CHARACTERIZED BY THE NET LOSS OF PERSONS SEEKING EMPLOYMENT OPPORTUNITIES IN OTHER STATES, WITH NATURAL INCREASE (BIRTHS - DEATHS) ACCOUNTING FOR THE STATE'S POPULATION INCREASE.

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TABLE 9

COMPONENTS OF POPULATION CHANGE BY COUNTY
STATE OF WASHINGTON
APRIL 1, 1980 TO APRIL 1, 1984

	1980 Census Count[1]	Revised 1981 Estimate[2]	1982 Estimate	1983 Estimate	1984 Estimate	Total Change 1980-1984	Births 1980-84	Deaths 1980-84	Natural Increase 1980-84	Net Migration 1980-84
WASHINGTON	4,132,204	4,226,600	4,264,000	4,285,100	4,328,100	195,896	276,957	128,530	148,427	47,469
Adams	13,267	13,100	13,100	13,600	13,700	433	1,232	324	908	-475
Asotin	16,823	16,900	17,000	16,800	16,900	77	1,090	603	486	-409
Benton	109,444	111,300	111,700	108,700	107,700	-1,744	8,808	2,194	6,614	-8,358
Chelan	45,061	45,600	45,500	46,500	47,500	2,439	3,066	1,938	1,127	1,312
Clallam	51,648	52,000	52,100	52,200	52,900	1,252	3,150	1,955	1,195	57
Clark	192,227	195,200	198,600	200,000	201,700	9,473	13,301	5,466	7,835	1,638
Columbia	4,057	4,000	4,000	4,000	4,100	43	241	212	28	15
Cowlitz	79,548	79,800	79,500	79,300	79,900	352	5,111	2,456	2,655	-2,303
Douglas	22,144	22,400	22,400	22,400	22,600	456	1,529	590	938	-482
Ferry	5,811	6,000	6,100	6,100	6,100	289	485	158	327	-38
Franklin	35,025	35,900	36,200	36,000	36,300	1,275	3,593	910	2,683	-1,408
Garfield	2,468	2,400	2,400	2,400	2,500	32	166	90	76	-44
Grant	48,522	48,500	48,600	49,100	49,500	978	3,700	1,400	2,300	-1,322
Grays Harbor	66,314	66,700	66,100	65,800	65,100	-1,214	4,310	2,637	1,674	-2,888
Island	44,048	45,300	46,000	47,000	47,800	3,752	3,191	1,150	2,041	1,711
Jefferson	15,965	16,600	16,900	16,800	17,000	1,035	974	596	378	657
King	1,269,749	1,300,800	1,311,400	1,315,800	1,326,600	56,851	73,684	38,604	35,080	21,771
Kitsap	147,152	156,500	158,500	161,600	162,500	15,348	10,825	4,439	6,385	8,963
Kittitas	24,877	25,100	25,100	24,900	25,000	123	1,328	806	522	-399
Klickitat	15,822	16,200	16,200	16,300	16,500	678	1,197	574	623	55
Lewis	56,025	56,400	56,400	56,000	56,600	575	3,825	2,092	1,732	-1,157
Lincoln	9,604	9,600	9,600	9,600	9,800	196	528	437	91	105
Mason	31,184	32,100	32,700	33,600	34,800	3,616	2,025	1,053	972	2,644
Okanogan	30,663	30,800	31,000	31,500	31,900	1,237	2,468	1,186	1,282	—45
Pacific	17,237	17,600	17,700	17,600	17,700	463	1,085	962	123	340
Pend Oreille	8,580	8,900	8,800	8,900	9,100	520	578	283	295	225
Pierce	485,667	499,700	504,500	507,000	514,600	28,933	37,264	14,775	22,489	6,444
San Juan	7,838	8,100	8,500	8,700	8,900	1,062	400	265	135	927
Skagit	64,138	64,300	65,600	66,100	66,800	2,662	4,468	2,492	1,976	686
Skamania	7,919	8,000	8,000	7,800	7,900	-19	519	156	363	-382
Snohomish	337,720	350,400	356,400	360,900	366,700	28,980	24,083	9,131	14,952	14,028
Spokane	341,835	346,800	348,100	348,000	349,400	7,565	22,550	11,663	10,887	-3,322
Stevens	28,979	29,200	29,400	29,700	30,100	1,121	2,258	944	1,314	-193
Thurston	124,264	128,600	131,300	133,500	136,200	11,936	8,578	3,691	4,888	7,048
Wahkiakum	3,832	3,800	3,800	3,700	3,800	-32	170	154	16	-48
Walla Walla	47,435	47,600	48,300	48,200	48,500	1,065	2,880	1,738	1,142	-77
Whatcom	106,701	109,500	111,100	112,100	113,700	6,999	6,712	3,223	3,489	3,510
Whitman	40,103	40,300	40,200	39,900	39,700	-403	2,030	865	1,166	-1,569
Yakima	172,508	174,600	175,200	177,000	180,000	7,492	13,555	6,317	7,238	254

[1]Includes 1980 census count corrections for Kitsap (543), Lewis (746), Pierce (24), and Snohomish (704), and Okanogan (24) counties.
[2]The 1981 estimates for the State and counties were recalculated using 1980 population counts by age which were not available in the spring of 1981.

NOTE: Detail may not add due to rounding.

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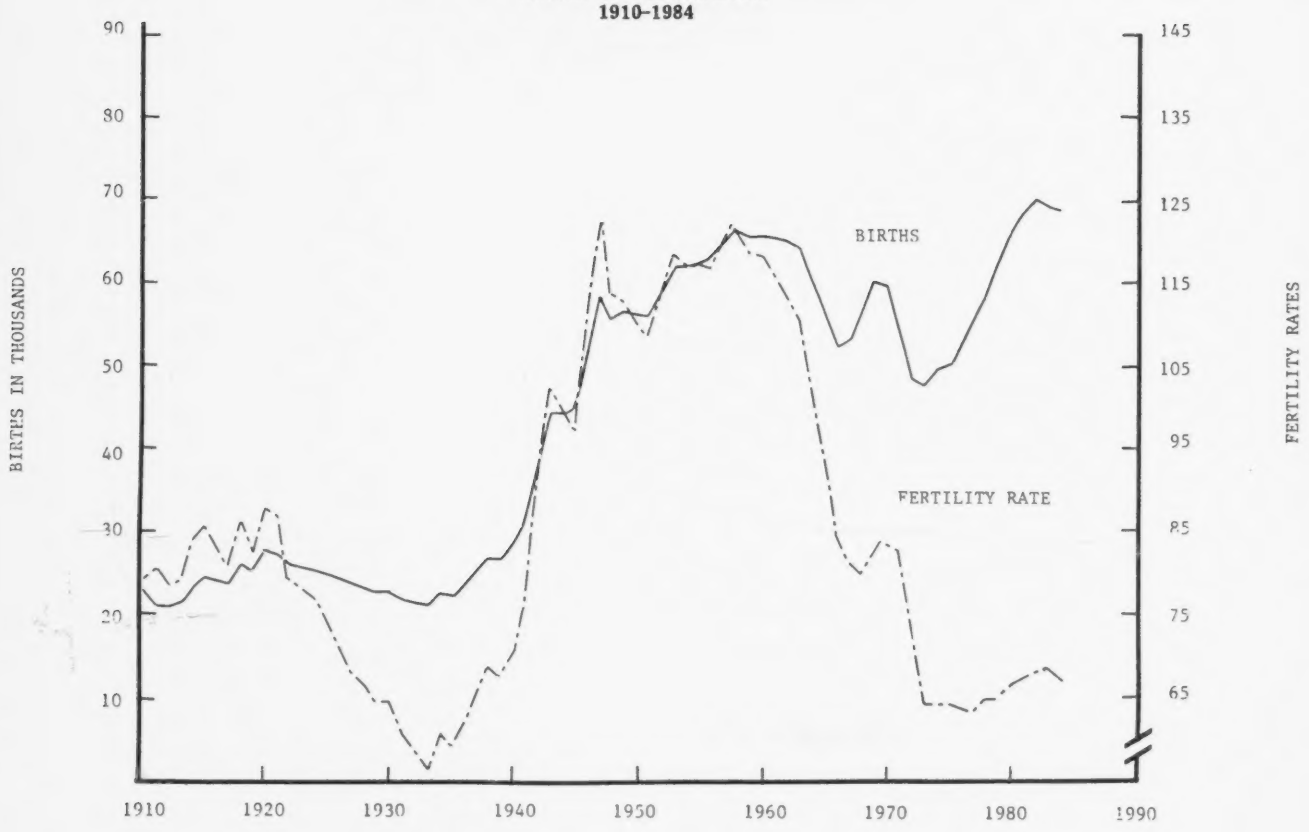
FIGURE 3

A DEMOGRAPHIC ROLLER COASTER
BIRTHS AND BIRTHS PER 1,000 WOMEN 15-44 YEARS
STATE OF WASHINGTON
1910-1984



- THE NUMBER OF BIRTHS IN WASHINGTON, WHICH STEADILY INCREASED FROM 47,697 IN 1973 TO 70,051 IN 1982, IS NOW SHOWING A SLIGHT DECLINE. THERE WERE AN ESTIMATED 69,456 BIRTHS IN 1983 AND 69,297 IN 1984.

- THE FERTILITY RATE (NUMBER OF BIRTHS PER 1,000 WOMEN IN CHILDBEARING AGE) DECLINED FROM 68.0 IN 1983 TO 67.1 IN 1984 DUE TO LOWER BIRTH LEVELS. THE RATE, HOWEVER, REMAINS HIGHER THAN DURING THE 1970's.

- THE TREND AWAY FROM EARLY MARRIAGE AND EARLY CHILDBEARING IS EXPECTED TO CONTINUE, AS IS THE PREFERENCE FOR SMALLER FAMILIES. THE AVERAGE NUMBER OF CHILDREN EXPECTED BY MARRIED WOMEN AGED 18-24 YEARS DECLINED FROM 2.9 IN 1967 TO 2.2 IN 1974, REMAINED ESSENTIALLY CONSTANT THROUGH 1981, AND DROPPED TO 2.1 IN 1982.

- THE FERTILITY RATE IN WASHINGTON IS CURRENTLY 67.1. THIS IS SUBSTANTIALLY LOWER THAN THE RATE OF ABOUT 78.0 REQUIRED FOR POPULATION REPLACEMENT-ZERO GROWTH.

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TABLE 10

GENERAL FERTILITY RATE[1]
STATE OF WASHINGTON
1930-1984

Ten Year Intervals	Females 15-44	Live Births[2]	General Fertility Rate[1]
1930	358,525	23,019	64.2
1940	398,246	27,952	70.2
1950	512,005	55,755	108.9
1960	554,814	65,251	117.6
1970	711,655[3]	59,930	84.2
1980	982,661	65,370	66.5
Single Years			
1961	559,900	65,328	116.7
1962	573,100	65,101	113.6
1963	578,600	63,919	110.5
1964	586,900	60,354	102.8
1965	603,200	55,879	92.6
1966	619,700	52,161	84.2
1967	648,900	52,897	81.5
1968	681,100	54,888	80.6
1969	701,100	58,012	82.7
1970	711,655[3]	59,930	84.2
1971	722,400	60,031	83.1
1972	725,900	53,096	73.1
1973	738,900	47,697	64.6
1974	765,100	48,159	62.9
1975	790,200	50,127	63.4
1976	818,000	51,398	62.8
1977	848,200	54,193	63.9
1978	889,300	57,281	64.4
1979	934,900	60,214	64.4
1980	982,661	65,370	66.5
1981	1,009,770	68,153	67.5
1982	1,018,960	70,051	68.7
1983	1,021,974	69,456[4]	68.0
1984	1,032,822	69,297[4]	67.1

[1]Births per 1,000 women aged 15-44 years.
[2]Calendar year figures for 1930 to 1960, April to April figures for 1961 to present
[3]Corrected 1970 population from the Bureau of the Census, actual 1980 census count.
[4]Estimated.

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TABLE 11

MARRIAGES AND DIVORCES/DISSOLUTIONS
STATE OF WASHINGTON
1950-1983

	April 1 Population State[1]	Marriages[2]	Marriage[3] Rate	Divorces[2]/ Dissolutions	Divorce[3] Rate
Ten Year Intervals					
1950	2,378,963	34,438[5]	14.5	11,197	4.7
1960	2,853,214	28,230	9.9	9,146	3.2
1970	3,413,244	41,310	12.1	17,881	5.2
1980	4,132,204	47,728	11.6	28,648	6.9
Single Years					
1951	2,424,000	NA	NA	NA	NA
1952	2,448,000	NA	NA	NA	NA
1953	2,466,000	NA	NA	NA	NA
1954	2,516,000	28,780[5]	11.4	8,321	3.3
1955	2,604,000	18,908	7.3	8,787[6]	3.4
1956	2,668,000	30,113[5]	11.3	8,641[6]	3.2
1957	2,724,000	28,441[5]	10.4	12,764	4.7
1958	2,773,000	27,961[5]	10.1	9,003[6]	3.2
1959	2,821,000	28,556[5]	10.1	9,341	3.3
1960	2,853,214	28,230	9.9	9,146	3.2
1961	2,897,000	28,247	9.8	9,355	3.2
1962	2,948,000	29,778	10.1	9,829	3.3
1963	2,972,000	29,320	9.9	9,953	3.3
1964	3,008,000	29,777	9.9	10,864	3.6
1965	3,065,000	31,509	10.3	10,651	3.5
1966	3,125,000	34,567	11.1	11,307	3.6
1967	3,229,000	38,477	11.9	12,836	4.0
1968	3,336,000	40,640	12.2	15,806	4.7
1969	3,397,000	40,966	12.1	16,665	4.9
1970	3,413,244	41,310	12.1	17,881	5.2
1971	3,436,300	40,981	11.9	19,019	5.5
1972	3,430,300	41,618	12.1	20,534	6.0
1973	3,444,300	41,359	12.0	21,369	6.2
1974	3,508,700	41,607	11.9	23,756	6.8
1975	3,567,890	41,767	11.7	25,783	7.2
1976	3,634,895	41,943	11.5	27,766	7.6
1977	3,715,375	43,737	11.8	26,483	7.1
1978	3,836,200	45,109	11.8	26,193	6.8
1979	3,979,200	47,086	11.8	27,469	6.9
1980	4,132,204	47,728	11.6	28,648	6.9
1981	4,226,600[4]	49,973	11.8	29,511	7.0
1982	4,264,000	48,228	11.3	27,980	6.6
1983	4,285,100	46,294	10.8	27,299	6.4

[1]Includes Interim Series of 1970 to 1980 Intercensal Estimate, developed May 1981.
[2]Calendar year figures.
[3]Marriages and divorces per 1,000 population.
[4]Revised 1981 estimate (see Table 9).
[5]Marriage licenses issued; other data reflect marriages performed.
[6]Federal estimates, actual number of divorces not available.

TABLE 12

ANNEXATIONS, INCORPORATIONS, AND
OTHER MUNICIPAL BOUNDARY CHANGES[1]
APPROVED BY THE OFFICE OF FINANCIAL MANAGEMENT
STATE OF WASHINGTON
APRIL 1, 1980 - MARCH 31, 1984

MUNICIPALITY BY COUNTY	ANNEXATIONS APPROVED BETWEEN APRIL 1, 1983 - MARCH 31, 1984					ANNEXATIONS APPROVED BETWEEN APRIL 1, 1980 - MARCH 31, 1984				
	NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.	NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.
Washington State Total	109	11.432	3,625	3,198	8,077	516	76.944	9,942	8,857	22,840
ADAMS	0	0.0	0	0	0	4	0.147	4	4	15
Hatton	0	0.0	0	0	0	0	0.0	0	0	0
Lind	0	0.0	0	0	0	0	0.0	0	0	0
Othello	0	0.0	0	0	0	1	0.063	0	0	0
Ritzville	0	0.0	0	0	0	3	0.084	4	4	15
Washtucna	0	0.0	0	0	0	0	0.0	0	0	0
ASOTIN	0	0.0	0	0	0	4	0.019	0	0	0
Asotin	0	0.0	0	0	0	0	0.0	0	0	0
Clarkston	0	0.0	0	0	0	4	0.019	0	0	0
BENTON	8	0.245	315	293	939	48	20.057	1,408	1,309	3,582
Benton City	0	0.0	0	0	0	5	0.201	18	16	52
Kennewick	8	0.245	315	293	939	35	1.958	1,126	1,032	2,872
Prosser	0	0.0	0	0	0	2	0.282	5	5	18
Richland	0	0.0	0	0	0	2	0.101	1	1	2
West Richland	0	0.0	0	0	0	4	17.535	258	255	638
CHELAN	0	0.0	0	0	0	6	0.234	18	15	38
Cashmere	0	0.0	0	0	0	3	0.116	15	13	31
Chelan	0	0.0	0	0	0	0	0.0	0	0	0
Entiat	0	0.0	0	0	0	1	0.019	0	0	0
Leavenworth	0	0.0	0	0	0	0	0.087	0	0	0
Wenatchee	0	0.0	0	0	0	2	0.011	3	2	7
CLALLAM	0	0.0	0	0	0	11	0.109	22	19	37
Forks	0	0.0	0	0	0	0	0.0	0	0	0
Port Angeles	0	0.0	0	0	0	3	0.019	8	7	14
Sequim	0	0.0	0	0	0	8	0.090	14	12	23
CLARK	5	1.560	33	30	79	13	3.437	49	46	113
Battle Ground	1	0.103	2	2	8	4	0.431	4	4	11
Camas	3	1.453	24	21	49	4	2.641	24	21	49
LaCenter	0	0.0	0	0	0	0	0.0	0	0	0
Ridgefield	0	0.0	0	0	0	0	0.0	0	0	0
Vancouver	1	0.004	7	7	22	5	0.366	21	21	53
Washougal	0	0.0	0	0	0	0	0.0	0	0	0
Yacolt	0	0.0	0	0	0	0	0.0	0	0	0
COLUMBIA	0	0.0	0	0	0	0	0.0	0	0	0
Dayton	0	0.0	0	0	0	0	0.0	0	0	0
Starbuck	0	0.0	0	0	0	0	0.0	0	0	0
COWLITZ	1	0.003	0	0	0	8	1.478	5	5	9
Castle Rock	0	0.0	0	0	0	0	0.0	0	0	0
Kalama	0	0.0	0	0	0	1	0.016	0	0	0
Kelso	0	0.0	0	0	0	4	1.344	5	5	9
Longview	1	0.003	0	0	0	1	0.003	0	0	0
Woodland	0	0.0	0	0	0	2	0.115	0	0	0
DOUGLAS	0	0.0	0	0	0	3	0.077	1	1	5
Bridgeport	0	0.0	0	0	0	0	0.0	0	0	0
East Wenatchee	0	0.0	0	0	0	2	0.066	0	0	0
Mansfield	0	0.0	0	0	0	0	0.0	0	0	0
Rock Island	0	0.0	0	0	0	0	0.0	0	0	0
Waterville	0	0.0	0	0	0	1	0.011	1	1	5
FERRY	0	0.0	0	0	0	0	0.0	0	0	0
Republic	0	0.0	0	0	0	0	0.0	0	0	0
FRANKLIN	0	0.0	0	0	0	5	8.572	48	46	93
Connell	0	0.0	0	0	0	2	0.013	1	1	8
Kahlotus	0	0.0	0	0	0	0	0.0	0	0	0
Mesa	0	0.0	0	0	0	1	1.077	0	0	0
Pasco	0	0.0	0	0	0	2	7.482	47	45	85

[1] All boundary changes are due to annexation unless otherwise noted.

MUNICIPALITY BY COUNTY	ANNEXATIONS APPROVED BETWEEN APRIL 1, 1983 - MARCH 31, 1984 NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.	MUNICIPALITY BY COUNTY	ANNEXATIONS APPROVED BETWEEN APRIL 1, 1980 - MARCH 31, 1984 NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.
GARFIELD	0	0.0	0	0	0	GARFIELD	0	0.0	0	0	0
Pomeroy	0	0.0	0	0	0	Pomeroy	0	0.0	0	0	0
GRANT	0	0.0	0	0	0	GRANT	9	1.052	1	1	2
Coulee City	0	0.0	0	0	0	Coulee City	0	0.0	0	0	0
Electric City	0	0.0	0	0	0	Electric City	1	0.004	1	1	2
Ephrata	0	0.0	0	0	0	Ephrata	2	0.109	0	0	0
George	0	0.0	0	0	0	George	0	0.0	0	0	0
Grand Coulee	0	0.0	0	0	0	Grand Coulee	0	0.0	0	0	0
Hartline	0	0.0	0	0	0	Hartline	0	0.0	0	0	0
Krupp	0	0.0	0	0	0	Krupp	0	0.0	0	0	0
Mattawa	0	0.0	0	0	0	Mattawa	1	0.078	0	0	0
Moses Lake	0	0.0	0	0	0	Moses Lake	4	0.860	0	0	0
Quincy	0	0.0	0	0	0	Quincy	1	0.000	0	0	0
Royal City	0	0.0	0	0	0	Royal City	0	0.0	0	0	0
Soap Lake	0	0.0	0	0	0	Soap Lake	0	0.0	0	0	0
Warden	0	0.0	0	0	0	Warden	0	0.0	0	0	0
Wilson Creek	0	0.0	0	0	0	Wilson Creek	0	0.0	0	0	0
GRAYS HARBOR	1	0.005	0	0	0	GRAYS HARBOR	14	0.376	3	3	7
Aberdeen	0	0.0	0	0	0	Aberdeen	0	0.0	0	0	0
Cosmopolis	0	0.0	0	0	0	Cosmopolis	0	0.0	0	0	0
Elma	0	0.0	0	0	0	Elma	3	0.037	2	2	5
Hoquiam	0	0.0	0	0	0	Hoquiam	0	0.0	0	0	0
McCleary	1	0.005	0	0	0	McCleary	2	0.008	0	0	0
Montesano	0	0.0	0	0	0	Montesano	7	0.325	1	1	2
Oakville	0	0.0	0	0	0	Oakville	2	0.005	0	0	0
Ocean Shores	0	0.0	0	0	0	Ocean Shores	0	0.0	0	0	0
Westport	0	0.0	0	0	0	Westport	0	0.0	0	0	0
ISLAND	2	0.003	1	0	0	ISLAND	2	0.003	1	0	0
Coupeville	2	0.003	1	0	0	Coupeville	2	0.003	1	0	0
Langley	0	0.0	0	0	0	Langley	0	0.0	0	0	0
Oak Harbor	0	0.0	0	0	0	Oak Harbor	0	0.0	0	0	0
JEFFERSON	0	0.0	0	0	0	JEFFERSON	0	0.0	0	0	0
Port Townsend	0	0.0	0	0	0	Port Townsend	0	0.0	0	0	0
KING	23	1.711	1,156	1,070	2,683	KING	77	6.871	3,179	3,006	7,804
Algona	0	0.0	0	0	0	Algona	0	0.0	0	0	0
Auburn	2	0.013	5	5	11	Auburn	12	0.462	48	45	94
Beaux Arts	0	0.0	0	0	0	Beaux Arts	0	0.0	0	0	0
Bellevue	0	0.0	0	0	0	Bellevue	1	0.012	0	0	0
Black Diamond	0	0.0	0	0	0	Black Diamond	0	0.0	0	0	0
Bothell	5	0.060	2	2	4	Bothell	19	0.286	26	26	91
Carnation	2	0.033	3	3	11	Carnation	2	0.033	3	3	11
Clyde Hill	0	0.0	0	0	0	Clyde Hill	0	0.0	0	0	0
Des Moines	1	0.873	1,103	1,022	2,555	Des Moines	3	1.491	2,007	1,884	5,014
Duvall	0	0.0	0	0	0	Duvall	2	0.031	0	0	0
Enumclaw	0	0.0	0	0	0	Enumclaw	0	0.0	0	0	0
Hunts Point	0	0.0	0	0	0	Hunts Point	0	0.0	0	0	0
Issaquah	0	0.0	0	0	0	Issaquah	2	0.230	7	7	18
Kent	1	0.000	0	0	0	Kent	1	0.000	0	0	0
Kirkland	0	0.0	0	0	0	Kirkland	3	0.138	33	33	89
Lake Forest Park	0	0.0	0	0	0	Lake Forest Park	2	0.022	8	6	16
Medina	0	0.0	0	0	0	Medina	0	0.0	0	0	0
Mercer Island	0	0.0	0	0	0	Mercer Island	0	0.0	0	0	0
Normandy Park	0	0.0	0	0	0	Normandy Park	1	0.389	774	754	1,827
North Bend	0	0.0	0	0	0	North Bend	2	0.787	18	18	50
Pacific	0	0.0	0	0	0	Pacific	0	0.0	0	0	0
Redmond	11	0.731	43	38	102	Redmond	17	1.909	166	146	372
Renton	1	0.000	0	0	0	Renton	5	0.217	42	38	115
Seattle	0	0.0	0	0	0	Seattle	0	0.0	0	0	0
Skykomish	0	0.0	0	0	0	Skykomish	0	0.0	0	0	0
Snoqualmie	0	0.0	0	0	0	Snoqualmie	2	0.847	39	38	94
Tukwila	0	0.0	0	0	0	Tukwila	3	0.017	8	8	13
Yarrow Point	0	0.0	0	0	0	Yarrow Point	0	0.0	0	0	0
KITSAP	5	0.435	18	17	47	KITSAP	9	0.559	36	35	88
Bremerton	1	0.017	0	0	0	Bremerton	2	0.132	15	15	33
Port Orchard	0	0.0	0	0	0	Port Orchard	0	0.0	0	0	0
Poulsbo	4	0.418	18	17	47	Poulsbo	5	0.425	20	19	54
Winslow	0	0.0	0	0	0	Winslow	2	0.002	1	1	1
KITTITAS	2	0.039	0	0	0	KITTITAS	10	3.426	5	5	15
Cle Elum	0	0.0	0	0	0	Cle Elum	0	0.0	0	0	0
Ellensburg	2	0.039	0	0	0	Ellensburg	9	0.246	5	5	15
Kittitas	0	0.0	0	0	0	Kittitas	0	0.0	0	0	0
Roslyn	0	0.0	0	0	0	Roslyn	1	3.180	0	0	0
South Cle Elum	0	0.0	0	0	0	South Cle Elum	0	0.0	0	0	0

MUNICIPALITY BY COUNTY	ANNEXATIONS APPROVED BETWEEN APRIL 1, 1983 - MARCH 31, 1984					ANNEXATIONS APPROVED BETWEEN APRIL 1, 1980 - MARCH 31, 1984				
	NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.	NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.
KLICKITAT	0	0.0	0	0	0	2	0.003	1	1	5
Bingen	0	0.0	0	0	0	0	0.0	0	0	0
Goldendale	0	0.0	0	0	0	2	0.003	1	1	5
White Salmon	0	0.0	0	0	0	0	0.0	0	0	0
LEWIS	2	0.036	4	3	9	6	0.192	38	34	60
Centralia	0	0.0	0	0	0	1	0.006	30	27	37
Chehalis	0	0.0	0	0	0	0	0.0	0	0	0
Morton	0	0.0	0	0	0	0	0.0	0	0	0
Mossyrock	0	0.0	0	0	0	0	0.0	0	0	0
Napavine	0	0.0	0	0	0	0	0.0	0	0	0
Pe Ell	0	0.0	0	0	0	0	0.0	0	0	0
Toledo	1	0.010	0	0	0	2	0.019	0	0	0
Vader	0	0.0	0	0	0	0	0.0	0	0	0
Winlock	1	0.027	4	3	9	3	0.166	8	7	23
LINCOLN	0	0.0	0	0	0	7	0.206	0	0	0
Almira	0	0.0	0	0	0	0	0.0	0	0	0
Creston	0	0.0	0	0	0	1	0.006	0	0	0
Davenport	0	0.0	0	0	0	5	0.196	0	0	0
Harrington	0	0.0	0	0	0	0	0.0	0	0	0
Odessa	0	0.0	0	0	0	0	0.0	0	0	0
Reardan	0	0.0	0	0	0	0	0.0	0	0	0
Sprague	0	0.0	0	0	0	0	0.0	0	0	0
Wilbur	0	0.0	0	0	0	1	0.003	0	0	0
MASON	0	0.0	0	0	0	2	0.022	17	17	35
Shelton	0	0.0	0	0	0	2	0.022	17	17	35
OKANOGAN	1	0.001	1	1	2	6	0.016	4	4	12
Brewster	0	0.0	0	0	0	1	0.000	0	0	0
Conconully	0	0.0	0	0	0	0	0.0	0	0	0
Coulee Dam	0	0.0	0	0	0	0	0.0	0	0	0
Elmer City	0	0.0	0	0	0	0	0.0	0	0	0
Nespelem	0	0.0	0	0	0	0	0.0	0	0	0
Okanogan	0	0.0	0	0	0	1	0.001	0	0	0
Omak	1	0.001	1	1	2	2	0.002	2	2	6
Oroville	0	0.0	0	0	0	0	0.0	0	0	0
Pateros	0	0.0	0	0	0	0	0.0	0	0	0
Riverside	0	0.0	0	0	0	0	0.0	0	0	0
Tonasket	0	0.0	0	0	0	0	0.0	0	0	0
Twisp	0	0.0	0	0	0	0	0.0	0	0	0
Winthrop	0	0.0	0	0	0	2	0.013	2	2	6
PACIFIC	3	0.503	195	52	120	6	0.560	205	61	137
Ilwaco	0	0.0	0	0	0	1	0.012	10	9	17
Long Beach	1	0.036	162	23	46	1	0.036	162	23	46
Raymond	2	0.468	33	29	74	4	0.512	33	29	74
South Bend	0	0.0	0	0	0	0	0.0	0	0	0
PEND OREILLE	0	0.0	0	0	0	7	0.082	12	11	39
Cusick	0	0.0	0	0	0	0	0.0	0	0	0
Ione	0	0.0	0	0	0	0	0.0	0	0	0
Metaline	0	0.0	0	0	0	0	0.0	0	0	0
Metaline Falls	0	0.0	0	0	0	0	0.0	0	0	0
Newport	0	0.0	0	0	0	7	0.082	12	11	39
PIERCE	14	2.104	96	91	203	32	3.517	231	211	478
Bonney Lake	7	0.379	1	0	0	14	0.639	2	1	2
Buckley	1	0.355	46	45	103	1	0.355	46	45	103
Carbonado	0	0.0	0	0	0	0	0.0	0	0	0
Dupont	0	0.0	0	0	0	1	0.047	0	0	0
Eatonville	0	0.0	0	0	0	1	0.050	3	3	7
Fife	1	0.053	17	16	31	1	0.053	17	16	31
Fircrest	0	0.0	0	0	0	1	0.001	0	0	0
Gig Harbor	2	0.015	3	1	1	2	0.015	3	1	1
Milton	0	0.0	0	0	0	1	0.311	89	76	163
Orting	0	0.0	0	0	0	0	0.0	0	0	0
Puyallup	2	0.162	2	2	7	3	0.709	23	23	61
Roy	0	0.0	0	0	0	0	0.0	0	0	0
Ruston	0	0.0	0	0	0	0	0.0	0	0	0
South Prairie	0	0.0	0	0	0	0	0.0	0	0	0
Steilacoom	0	0.0	0	0	0	0	0.0	0	0	0
Sumner	1	1.141	27	27	61	5	1.248	34	33	73
Tacoma	0	0.0	0	0	0	2	0.088	14	13	37
Wilkeson	0	0.0	0	0	0	0	0.0	0	0	0
SAN JUAN	0	0.0	0	0	0	0	0.0	0	0	0
Friday Harbor	0	0.0	0	0	0	0	0.0	0	0	0

MUNICIPALITY BY COUNTY	NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.
ANNEXATIONS APPROVED BETWEEN APRIL 1, 1983 - MARCH 31, 1984					
SKAGIT	0	0.0	0	0	0
Anacortes	0	0.0	0	0	0
Burlington	0	0.0	0	0	0
Concrete	0	0.0	0	0	0
Hamilton	0	0.0	0	0	0
La Conner	0	0.0	0	0	0
Lyman	0	0.0	0	0	0
Mount Vernon	0	0.0	0	0	0
Sedro Woolley	0	0.0	0	0	0
SKAMANIA	0	0.0	0	0	0
North Bonneville	0	0.0	0	0	0
Stevenson	0	0.0	0	0	0
SNOHOMISH	18	3.052	1,756	1,594	3,869
Arlington	0	0.0	0	0	0
Brier	1	0.001	0	0	0
Darrington	2	0.155	35	32	74
Edmonds	3	0.158	81	78	174
Everett	4	0.576	37	35	94
Gold Bar	0	0.0	0	0	0
Granite Falls	0	0.0	0	0	0
Index	0	0.0	0	0	0
Lake Stevens	0	0.0	0	0	0
Lynnwood	3	0.204	67	66	157
Marysville	0	0.0	0	0	0
Mill Creek[2]	1	1.920	1,528	1,376	3,355
Monroe	0	0.0	0	0	0
Mountlake Terrace	3	0.022	8	7	15
Mukilteo	0	0.0	0	0	0
Snohomish	0	0.0	0	0	0
Stanwood	1	0.015	0	0	0
Sultan	0	0.0	0	0	0
Woodway	0	0.0	0	0	0
SPOKANE	1	0.010	1	1	3
Airway Heights	0	0.0	0	0	0
Cheney	1	0.010	1	1	3
Deer Park	0	0.0	0	0	0
Fairfield	0	0.0	0	0	0
Latah	0	0.0	0	0	0
Medical Lake	0	0.0	0	0	0
Millwood	0	0.0	0	0	0
Rockford	0	0.0	0	0	0
Spangle	0	0.0	0	0	0
Spokane	0	0.0	0	0	0
Waverly	0	0.0	0	0	0
STEVENS	4	0.996	21	19	46
Chewelah	2	0.953	6	6	13
Colville	1	0.016	0	0	0
Kettle Falls	1	0.028	15	13	33
Marcus	0	0.0	0	0	0
Northport	0	0.0	0	0	0
Springdale	0	0.0	0	0	0
THURSTON	4	0.208	0	0	0
Bucoda	0	0.0	0	0	0
Lacey	0	0.0	0	0	0
Olympia	1	0.184	0	0	0
Rainier	0	0.0	0	0	0
Tenino	0	0.0	0	0	0
Tumwater	3	0.023	0	0	0
Yelm	0	0.0	0	0	0
WAHKIAKUM	0	0.0	0	0	0
Cathlamet	0	0.0	0	0	0
WALLA WALLA	7	0.187	5	4	10
College Place	1	0.039	1	1	3
Prescott	0	0.0	0	0	0
Waitsburg	0	0.0	0	0	0
Walla Walla	6	0.148	4	3	7

MUNICIPALITY BY COUNTY	NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.
ANNEXATIONS APPROVED BETWEEN APRIL 1, 1980 - MARCH 31, 1984					
SKAGIT	21	1.636	17	17	42
Anacortes	1	0.120	3	3	5
Burlington	4	0.041	5	5	13
Concrete	1	0.063	0	0	0
Hamilton	0	0.0	0	0	0
La Conner	0	0.0	0	0	0
Lyman	0	0.0	0	0	0
Mount Vernon	11	1.322	8	8	20
Sedro Woolley	4	0.091	1	1	4
SKAMANIA	0	0.0	0	0	0
North Bonneville	0	0.0	0	0	0
Stevenson	0	0.0	0	0	0
SNOHOMISH	74	8.667	3,650	3,144	7,817
Arlington	3	0.111	1	1	4
Brier	2	0.003	0	0	0
Darrington	4	0.220	35	32	74
Edmonds	8	0.181	105	100	233
Everett	9	3.395	43	41	113
Gold Bar	0	0.0	0	0	0
Granite Falls	1	0.004	0	0	0
Index	0	0.0	0	0	0
Lake Stevens	2	0.076	3	3	9
Lynnwood	8	0.307	133	131	340
Marysville	6	0.480	268	256	619
Mill Creek[2]	1	1.920	1,528	1,376	3,355
Monroe	3	0.015	3	1	1
Mountlake Terrace	21	0.190	35	31	86
Mukilteo	1	1.578	1,433	1,122	2,834
Snohomish	2	0.053	62	49	146
Stanwood	3	0.132	1	1	3
Sultan	0	0.0	0	0	0
Woodway	0	0.0	0	0	0
SPOKANE	15	9.349	83	73	250
Airway Heights	2	2.156	43	35	106
Cheney	3	0.175	1	1	3
Deer Park	4	3.276	5	5	9
Fairfield	2	0.009	1	1	2
Latah	0	0.0	0	0	0
Medical Lake	1	0.188	2	2	3
Millwood	0	0.0	0	0	0
Rockford	0	0.0	0	0	0
Spangle	1	0.028	1	1	3
Spokane	2	3.517	30	28	124
Waverly	0	0.0	0	0	0
STEVENS	12	1.585	36	34	94
Chewelah	3	1.009	8	8	21
Colville	6	0.483	13	13	40
Kettle Falls	2	0.030	15	13	33
Marcus	1	0.063	0	0	0
Northport	0	0.0	0	0	0
Springdale	0	0.0	0	0	0
THURSTON	29	1.513	334	272	579
Bucoda	1	0.066	0	0	0
Lacey	5	0.278	161	126	287
Olympia	11	0.569	65	59	109
Rainier	0	0.0	0	0	0
Tenino	1	0.026	7	4	8
Tumwater	9	0.506	101	83	175
Yelm	2	0.069	0	0	0
WAHKIAKUM	0	0.0	0	0	0
Cathlamet	0	0.0	0	0	0
WALLA WALLA	19	0.503	58	57	154
College Place	7	0.164	28	28	70
Prescott	0	0.0	0	0	0
Waitsburg	0	0.0	0	0	0
Walla Walla	12	0.338	30	29	84

[2] Mill Creek incorporation, September 1983.

ANNEXATIONS APPROVED BETWEEN APRIL 1, 1983 - MARCH 31, 1984

MUNICIPALITY BY COUNTY	NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.
WHATCOM	3	0.181	2	2	6
Bellingham	0	0.0	0	0	0
Blaine	1	0.014	1	1	2
Everson	1	0.159	0	0	0
Ferndale	0	0.0	0	0	0
Lynden	0	0.0	0	0	0
Nooksack	0	0.0	0	0	0
Sumas	1	0.008	1	1	4
WHITMAN	0	0.0	0	0	0
Albion	0	0.0	0	0	0
Colfax	0	0.0	0	0	0
Colton	0	0.0	0	0	0
Endicott	0	0.0	0	0	0
Farmington	0	0.0	0	0	0
Garfield	0	0.0	0	0	0
Lacrosse	0	0.0	0	0	0
Lamont	0	0.0	0	0	0
Malden	0	0.0	0	0	0
Oakesdale	0	0.0	0	0	0
Palouse	0	0.0	0	0	0
Pullman	0	0.0	0	0	0
Rosalia	0	0.0	0	0	0
St. John	0	0.0	0	0	0
Tekoa	0	0.0	0	0	0
Uniontown	0	0.0	0	0	0
YAKIMA	5	0.153	21	21	61
Grandview	1	0.004	0	0	0
Granger	0	0.0	0	0	0
Harrah	0	0.0	0	0	0
Mabton	1	0.001	0	0	0
Moxee City	0	0.0	0	0	0
Naches	0	0.0	0	0	0
Selah	1	0.010	1	1	2
Sunnyside	2	0.138	20	20	59
Tieton	0	0.0	0	0	0
Toppenish	0	0.0	0	0	0
Union Gap	0	0.0	0	0	0
Wapato	0	0.0	0	0	0
Yakima	0	0.0	0	0	0
Zillah	0	0.0	0	0	0

ANNEXATIONS APPROVED BETWEEN APRIL 1, 1980 - MARCH 31, 1984

MUNICIPALITY BY COUNTY	NO. OF PARCELS	AREA IN SQ. MILES	HOUSING UNITS TOTAL	HOUSING UNITS OCCUPIED	ANNEXED POP.
WHATCOM	13	0.915	208	175	366
Bellingham	2	0.126	2	2	5
Blaine	2	0.016	1	1	2
Everson	3	0.169	1	1	3
Ferndale	3	0.586	190	169	337
Lynden	1	0.001	13	10	15
Nooksack	0	0.0	0	0	0
Sumas	2	0.017	1	1	4
WHITMAN	5	0.393	5	4	5
Albion	0	0.0	0	0	0
Colfax	0	0.0	0	0	0
Colton	0	0.0	0	0	0
Endicott	0	0.0	0	0	0
Farmington	0	0.0	0	0	0
Garfield	0	0.0	0	0	0
Lacrosse	0	0.0	0	0	0
Lamont	0	0.0	0	0	0
Malden	0	0.0	0	0	0
Oakesdale	0	0.0	0	0	0
Palouse	2	0.001	2	2	3
Pullman	2	0.388	3	2	2
Rosalia	0	0.0	0	0	0
St. John	1	0.004	0	0	0
Tekoa	0	0.0	0	0	0
Uniontown	0	0.0	0	0	0
YAKIMA	37	1.369	263	247	959
Grandview	9	0.390	139	133	489
Granger	0	0.0	0	0	0
Harrah	0	0.0	0	0	0
Mabton	1	0.001	0	0	0
Moxee City	1	0.047	1	1	6
Naches	1	0.004	3	3	12
Selah	3	0.222	1	1	2
Sunnyside	7	0.401	41	41	123
Tieton	6	0.106	4	3	8
Toppenish	1	0.033	10	8	24
Union Gap	0	0.0	0	0	0
Wapato	0	0.0	0	0	0
Yakima	6	0.105	61	54	286
Zillah	2	0.059	3	3	9

NOTE: 0.000 means less than 0.001 area in square miles annexed.

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8/84

TABLE 13

OFFICIAL APRIL 1, 1984 POPULATION OF
CITIES AND TOWNS IN ALPHABETICAL ORDER
STATE OF WASHINGTON

*Actual Census

CITY	COUNTY	1984 POPULATION
Aberdeen	Grays Harbor	17,400
Airway Heights	Spokane	1,795
Albion	Whitman	625
Algona	King	1,555
Almira	Lincoln	345
Anacortes	Skagit	9,510
Arlington	Snohomish	3,270
Asotin	Asotin	992*
Auburn	King	29,170
Battle Ground	Clark	2,980
Beaux Arts	King	305
Bellevue	King	78,620
Bellingham	Whatcom	46,010
Benton City	Benton	1,975
Bingen	Klickitat	650
Black Diamond	King	1,125
Blaine	Whatcom	2,325
Bonney Lake	Pierce	6,260
Bothell (Part)	King	7,740
Bothell (Part)	Snohomish	40
Bremerton	Kitsap	33,970
Brewster	Okanogan	1,365
Bridgeport	Douglas	1,045
Brier	Snohomish	3,390
Buckley	Pierce	3,200
Bucoda	Thurston	535
Burlington	Skagit	3,870
Camas	Clark	5,500
Carbonado	Pierce	460
Carnation	King	1,100*
Cashmere	Chelan	2,295
Castle Rock	Cowlitz	2,125
Cathlamet	Wahkiakum	625
Centralia	Lewis	11,770
Chehalis	Lewis	5,950
Chelan	Chelan	3,030
Cheney	Spokane	7,540
Chewelah	Stevens	2,045
Clarkston	Asotin	6,760
Cle Elum	Kittitas	1,820
Clyde Hill	King	3,100
Colfax	Whitman	2,780
College Place	Walla Walla	5,813*
Colton	Whitman	290
Colville	Stevens	4,630
Conconully	Okanogan	162*
Concrete	Skagit	565
Connell	Franklin	2,065*
Cosmopolis	Grays Harbor	1,535
Coulee City	Grant	631*
Coulee Dam (Part)	Okanogan	1,018*
Coulee Dam (Part)	Douglas	223*
Coulee Dam (Part)	Grant	2*
Coupeville	Island	1,098*
Creston	Lincoln	310
Cusick	Pend Oreille	259*
Darrington	Snohomish	1,005*
Davenport	Lincoln	1,600
Dayton	Columbia	2,640
Deer Park	Spokane	2,260
Des Moines	King	13,100
Du Pont	Pierce	587*
Duvall	King	996*
East Wenatchee	Douglas	1,670
Eatonville	Pierce	1,125
Edmonds	Snohomish	27,880
Electric City	Grant	965
Ellensburg	Kittitas	11,590
Elma	Grays Harbor	2,450
Elmer City	Okanogan	323*
Endicott	Whitman	303*
Entiat	Chelan	500*
Enumclaw	King	5,920
Ephrata	Grant	5,440
Everett	Snohomish	56,680
Everson	Whatcom	1,060
Fairfield	Spokane	585
Farmington	Whitman	180
Ferndale	Whatcom	4,440
Fife	Pierce	2,425
Fircrest	Pierce	5,320
Forks	Clallam	2,849*
Friday Harbor	San Juan	1,250
Garfield	Whitman	595
George	Grant	265
Gig Harbor	Pierce	2,550
Gold Bar	Snohomish	845
Goldendale	Klickitat	3,660
Grand Coulee	Grant	1,210
Grandview	Yakima	6,440
Granger	Yakima	1,785
Granite Falls	Snohomish	895
Hamilton	Skagit	220
Harrah	Yakima	350
Harrington	Lincoln	510
Hartline	Grant	165
Hatton	Adams	91*
Hoquiam	Grays Harbor	9,390
Hunts Point	King	530
Ilwaco	Pacific	588*
Index	Snohomish	142*
Ione	Pend Oreille	580
Issaquah	King	5,570
Kahlotus	Franklin	226*
Kalama	Cowlitz	1,170
Kelso	Cowlitz	10,840
Kennewick	Benton	37,240
Kent	King	26,250
Kettle Falls	Stevens	1,225
Kirkland	King	18,670
Kittitas	Kittitas	935
Krupp	Grant	80*
La Conner	Skagit	645
La Crosse	Whitman	371*
LaCenter	Clark	400
Lacey	Thurston	14,520
Lake Forest Park	King	2,420
Lake Stevens	Snohomish	1,740
Lamont	Whitman	87*
Langley	Island	725
Latah	Spokane	171*
Leavenworth	Chelan	1,515
Lind	Adams	590
Long Beach	Pacific	1,335
Longview	Cowlitz	29,820
Lyman	Skagit	255
Lynden	Whatcom	4,430
Lynnwood	Snohomish	23,139*
Mabton	Yakima	1,275
Malden	Whitman	205
Mansfield	Douglas	385*
Marcus	Stevens	170
Marysville	Snohomish	6,350
Mattawa	Grant	421*
McCleary	Grays Harbor	1,440
Medical Lake	Spokane	3,600
Medina	King	3,110
Mercer Island	King	20,910
Mesa	Franklin	280
Metaline	Pend Oreille	200

*Actual Census

CITY	COUNTY	1984 POPULATION
Metaline Falls	Pend Oreille	290
Mill Creek	Snohomish	3,561*
Millwood	Spokane	1,685
Milton (Part)	King	400
Milton (Part)	Pierce	3,070
Monroe	Snohomish	3,050
Montesano	Grays Harbor	3,230
Morton	Lewis	1,215
Moses Lake	Grant	10,350
Mossyrock	Lewis	475
Mount Vernon	Skagit	13,730
Mountlake Terrace	Snohomish	16,020
Moxee City	Yakima	740
Mukilteo	Snohomish	4,945*
Naches	Yakima	675
Napavine	Lewis	725
Nespelem	Okanogan	280
Newport	Pend Oreille	1,570
Nooksack	Whatcom	570
Normandy Park	King	5,960
North Bend	King	1,770
North Bonneville	Skamania	415*
Northport	Stevens	455*
Oak Harbor	Island	12,210
Oakesdale	Whitman	440
Oakville	Grays Harbor	599*
Ocean Shores	Grays Harbor	2,055
Odessa	Lincoln	1,094*
Okanogan	Okanogan	2,350
Olympia	Thurston	28,790
Omak	Okanogan	3,910
Oroville	Okanogan	1,500
Orting	Pierce	1,875
Othello	Adams	4,550
Pacific	King	2,380
Palouse	Whitman	931*
Pasco	Franklin	18,930
Pateros	Okanogan	530
Pe Ell	Lewis	598*
Pomeroy	Garfield	1,675
Port Angeles	Clallam	17,220
Port Orchard	Kitsap	4,840
Port Townsend	Jefferson	6,250
Poulsbo	Kitsap	3,720
Prescott	Walla Walla	296*
Prosser	Benton	4,180
Pullman	Whitman	22,770
Puyallup	Pierce	18,600
Quincy	Grant	3,620
Rainier	Thurston	1,010
Raymond	Pacific	3,000
Reardan	Lincoln	485
Redmond	King	27,340
Renton	King	33,340
Republic	Ferry	960
Richland	Benton	31,660
Ridgefield	Clark	1,130
Ritzville	Adams	1,850
Riverside	Okanogan	265*
Rock Island	Douglas	510
Rockford	Spokane	430
Rosalia	Whitman	575
Roslyn	Kittitas	980
Roy	Pierce	355
Royal City	Grant	815
Ruston	Pierce	620
Saint John	Whitman	508*
Seattle	King	490,300
Sedro Woolley	Skagit	6,260
Selah	Yakima	4,610
Sequim	Clallam	3,280
Shelton	Mason	7,600
Skykomish	King	226*
Snohomish	Snohomish	5,500
Snoqualmie	King	1,480
Soap Lake	Grant	1,275
South Bend	Pacific	1,635
South Cle Elum	Kittitas	480
South Prairie	Pierce	230
Spangle	Spokane	240*
Spokane	Spokane	171,500
Sprague	Lincoln	476*
Springdale	Stevens	235*
Stanwood	Snohomish	1,555*
Starbuck	Columbia	235
Steilacoom	Pierce	4,950
Stevenson	Skamania	1,150
Sultan	Snohomish	1,750
Sumas	Whatcom	771*
Sumner	Pierce	5,160
Sunnyside	Yakima	9,740
Tacoma	Pierce	159,400
Tekoa	Whitman	860
Tenino	Thurston	1,375
Tieton	Yakima	540
Toledo	Lewis	565*
Tonasket	Okanogan	1,060
Toppenish	Yakima	6,570
Tukwila	King	3,860
Tumwater	Thurston	7,240
Twisp	Okanogan	850
Union Gap	Yakima	3,140
Uniontown	Whitman	297*
Vader	Lewis	395*
Vancouver	Clark	42,850
Waitsburg	Walla Walla	1,060
Walla Walla	Walla Walla	25,640
Wapato	Yakima	3,350
Warden	Grant	1,470
Washougal	Clark	4,040
Washtucna	Adams	300
Waterville	Douglas	880*
Waverly	Spokane	113*
Wenatchee	Chelan	17,330
West Richland	Benton	3,650
Westport	Grays Harbor	1,850
White Salmon	Klickitat	1,940
Wilbur	Lincoln	1,120
Wilkeson	Pierce	340
Wilson Creek	Grant	188*
Winlock	Lewis	1,025
Winslow	Kitsap	2,570
Winthrop	Okanogan	420
Woodland (Part)	Cowlitz	2,470
Woodland (Part)	Clark	80
Woodway	Snohomish	890
Yacolt	Clark	555
Yakima	Yakima	49,340
Yarrow Point	King	1,045*
Yelm	Thurston	1,385
Zillah	Yakima	1,730

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SPECIAL REPORTS

MANAGING A RANDOM SURVEY: THE BELLEVUE EXPERIENCE

By

Steven M. Cohn[1]

Population estimates for the municipalities of Washington State have become increasingly important to budget-conscious law and policy makers. Revenue sharing funds are allocated on the basis of these population estimates. To medium sized cities like the City of Bellevue, a small percentage increase or decrease in population can mean a radical difference in the amount of funds received. For the City of Bellevue, each percent decrease in population will result in an approximate loss of $30,000.

Performing a city wide census (100 percent count) or even a city wide survey requires a significant cost and tremendous amount of effort. The decision to commit to an undertaking of that magnitude should not be taken lightly. It is not enough to have a "feeling" that the State's estimate is invalid. A decision to census or survey should be made only after an objective examination of the assumptions used as the basis of the population estimate. The assumptions must be carefully analyzed to determine whether the demographics have changed since the last complete count, and if doing a survey, whether the change is expected to be measurable.

THE BELLEVUE PROBLEM

Our Bellevue experience is a case in point. Bellevue had a reputation as being a typical suburb in the 1960s and 1970s. Everyone assumed that the people moving in during the late 1970s were the same as those who had moved in a decade earlier. No one had focused on the fact that, as the City matured, its demographics were changing.

[1]Special thanks to Eric Gorbman who not only did most of the preliminary work on the survey, but contributed valuable suggestions to this article as well.

In 1980, Bellevue staff developed its population estimate by using the baseline estimate of the previous year. Then staff counted the new units, estimated the vacancy rate, and developed a population estimate of 80,000 people. This estimate in and of itself seemed reasonable, for it was consistent with the 1975-1979 calculated growth rate. (None of the population estimates during those years had been verified by either census or survey). Reality set in when the preliminary census count - the first empirically derived count in eight years - was released. It showed Bellevue's population to be only 74,000.

GAUGING THE NEED FOR A SURVEY

Why was the Bellevue City derived estimate so different from the 1980 Federal Census? Subsequently, Bellevue has investigated the demographic changes that occurred during the 1970s. A careful analysis of the 1980 Census and observation of nationwide trends suggest that the "baby boom" generation that had made up the largest portion of the City's population for almost two decades had grown up and moved away from their parents' homes. This may explain, in part, the reduction in household size that occurred in Bellevue during the previous decade. Another portion of the decline in household size could be explained by the increased numbers of multifamily units available (built during the Boeing boom years of 1975-1980) and the prosperous economic conditions of the late 1970s. These circumstances kept rents relatively low and allowed many one and two family households to form during the late 1970s.

However, as early as 1981, Bellevue's demographics were changing again. Driving around the City, staff could observe the beginnings of what was later dubbed the "Baby Boomlet". These observations were reinforced by a more detailed age-cohort analysis of the Census that showed that certain areas of the City had a relatively large percentage of under five-year olds. There was also evidence from a vacancy survey performed in 1981 that the household size was not decreasing as rapidly as an extrapolation of the 1970-1980 census data would suggest. This was due in part to a rapid economic downturn which not only slowed the formation of new households, but may have actually caused some households to combine.

The final piece of evidence showing that significant change had occurred came from the Bellevue School District. Their data revealed that the number of children entering Kindergarten was increasing each year, that the number of high school graduates was decreasing, and that in the near future there would be more people entering the school system than leaving it. This represented a sharp reversal from the 1970s when declining enrollment had caused the district to close a number of elementary and junior high schools.

All these indicators strongly suggested that the trendline established by the 70-80 Census had shifted, and it was time to measure the magnitude of the shift.

LAYING THE FOUNDATION

Developing a survey to measure such a shift is not easy. Almost a year before the survey was conducted, Bellevue staff contacted Office of Financial Management (OFM) staff to discuss the possibility of performing a household size survey and to predetermine a sample size that would be appropriate for the degree of reliability that would be needed. A household size survey might be required to measure a shift as minute as of 1/10 of a person per household. Both City and the State staff wanted to be sure that the survey would be sensitive enough to detect such changes. In addition, to provide data for future estimates it would be necessary to produce separate household size and vacancy rate estimates for both single-family and multifamily units. A scoping estimate showed that such a survey must contain between 5,000 and 6,000 housing units to gain the accuracy that was required. Given a projected cost of $2 per surveyed household, the City Council was asked to allocate $12,000 for the project. This request was accepted as part of the 1984 budget.

In February, Bellevue staff began to negotiate in earnest with representatives of OFM about an exact sample size. Balancing the need for statistical reliability with the need for fiscal responsibility was not an easy task. Pure statistics called for a sample size of about 10,000 units or 33 percent of the housing stock of the City. As mentioned earlier, Bellevue's allotted budget for the survey was for a sample of 5,000-6,000 units which represented 15-20 percent of the total housing stock. Our staffs came to a compromise - we would hold to a very tight deviation on the single-family household size and loosen somewhat to allowable deviation on the

multifamily size. This decreased the number of multifamily units to be surveyed. Using the revised parameters, the sample size was recalculated to be 7,500, or one out of every four units in the City.

ORGANIZING A RANDOM SAMPLE

A sample of this magnitude would have been too large to generate manually, so the City's computer staff was enlisted to help. A sample survey requires access to a 100 percent address listing to ensure that each household has an equally random chance of being selected to participate in the survey. Fortunately, the City's Utility Department bills all households for storm drainage, so a complete address list was available. This listing also separated the housing units into single-family and multifamily categories.

To ensure survey randomness, the computer staff developed a program to print a listing for every fourth household in the City. The list came to about 7,700, which was a considerably larger sample than the 7,500 that was required. In analyzing the billing addresses, staff learned that a fountain received a billing, as did the Municipal Golf Course. (Both entities use water that is billed at residential rates). There were also a few addresses that couldn't be found - one wonders how the Post Office delivers their bills. On the other hand, our enumerators found houses that were hidden from the street and that did not have access to the street from which they are addressed.

This did not happen by chance. Staff spent almost a month in preparatory work for the survey itself. After receiving the printout of more than 7,500 addresses, the addresses were organized into logical survey routes by assigning them to Kroll Map Sections (approximately 1/2 mile square). This proved to be an efficient method of covering the City while minimizing the enumerators' driving time.

SUGGESTIONS FROM LESSONS LEARNED

The day-to-day operation of the survey, while not without problems, went relatively smoothly. In the hope that other jurisdictions can benefit from the experience of Bellevue, the following suggestions are listed. These can be applied to any type of household survey - be it a 25 percent sample or a 100 percent count.

1. Training of enumerators is all-important. Bellevue hired an individual who had trained Census enumerators in 1980. The training session lasted about 4 hours and covered all aspects of the job, from paperwork to map reading to role-playing in a mock enumeration interview.

2. Availability of up-to-date maps is a necessity. Even though most cities are laid out on a grid system, there are always built-up areas that are exceptions to the rule. In Bellevue's case, an individual was assigned to work 4-6 hours per day on finding "lost" addresses. If only 5 percent of the addresses in our sample were not found by field enumerators, that resulted in almost 400 "lost" units. For each of these addresses, someone had to locate the actual unit on a map, and write instructions on how to find it.

3. Keep track of paperwork. Paperwork increases exponentially as the sample size increases (Cohn's Law). The 1981 City survey consisted of about 2,000 households and could be organized in about 40 files. The 1984 survey of 7,500 households required hundreds of files to provide efficient tracking. In retrospect, it probably would have been more efficient to develop computer files when the sample size reached about 5,000.

4. Make certain that someone is always in charge.

   The Bellevue survey utilized 20 enumerators who reported to two supervisors. The survey office was open 12 hours per day - from 8:00 a.m. to 8:00 p.m. The supervisors covered these hours, but to do so meant that their shifts overlapped a few hours a day. During those periods, an individual was assigned lead responsibility. This ensured that someone was ultimately in charge at all times.

Other lessons included -

1. Attract media attention. This legitimizes the survey and helps increase the response rate.

2. Have a "telephone response card" ready to hang on the front door if the enumerator finds that no one is home. Additionally, the survey team should have someone available 12 hours a day to answer the phone. Fifteen to twenty percent of our responses resulted from our response card. Given the number of phone calls that a survey like this generates, it is preferable to have a direct phone line - one that doesn't go through a receptionist.

3. Enumerate between 4:00 p.m. and sundown. Our experience is that the number of two-income families is greater than the 1980 Census estimate suggests. Our enumerators found almost no one home before noon. Conversely, enumerating on weekends resulted in very high response rates. The next time the City takes a large survey, it will begin on a Saturday instead of a Monday and essentially gain an extra weekend in the process.

In the final analysis, a good survey needs to elicit the cooperation of those being surveyed - in this case, the residents. This was accomplished by making certain that the enumerators were non-threatening (didn't ask too many questions), looked professional, and acted professionally.

After the survey had ended and staff had a few weeks to reflect on the experience, preliminary findings triggered thoughts about further refinements and other questions to be asked next time. But that will have to wait for a while. Doing a survey like this is a massive undertaking. It is time consuming and to be frank, quite tiring. On the other hand, when we were in the midst of it, it was a lot of fun. So, come 1987 or 1988, we'll be back!

USE OF SURVEY DATA IN DEVELOPING OFFICE OF FINANCIAL MANAGEMENT HOUSING UNIT ESTIMATES

by
Theresa J. Lowe

Introduction

The Office of Financial Management has specific criteria for accepting survey data to be used in developing housing unit population estimates. The purpose of this paper is to outline and discuss these survey requirements. Two basic sets of requirements are used. One set of requirements applies to survey data collected by independent firms. These data are often submitted by local jurisdictions for consideration by OFM in developing their April 1 population estimate. A second set of standards applies to surveys conducted by cities or counties.

I. Surveys Conducted by Independent Firms

Independent firms, in this context, simply means survey data from sources other than local jurisdictions. Many independent public and private agencies collect information on occupancy rates in local communities (e.g., Postal Vacancy Surveys, Cain and Scott, Inc., real estate surveys). Some of these data can be used to trend occupancy rates for developing current population estimates. These data, however, are never used without adjustment, and in every case, the survey information must be carefully evaluated against 1980 census counts.

Information on household size is not readily available for local communities. The Current Population Survey, conducted by the Bureau of the Census, provides household size data at the national and regional level. Unfortunately, these data are not specific enough for application in developing local population estimates. This will be briefly discussed in section I.B.

A. Occupancy/Vacancy Surveys

Experience has shown that independent surveys, conducted for other purposes, do not provide an accurate representation of city housing in terms of federal census housing definitions and boundaries. For example, most real estate survey data do not include vacant new constructions, and vacant substandard housing. These surveys also tend to include housing beyond the city limits. Suburban housing generally has higher occupancy rates than do housing units in the city core.

Estimates of city housing stock used for OFM's housing unit method are developed from 1980 census housing counts. These tabulations include new vacant constructions and vacant dilapidated units. When occupancy rates from independent surveys are applied to census housing counts, without adjustment, the number of occupied units is overstated. This results in an inflated population estimate.

To evaluate the utility of a survey for developing an estimate of current occupancy rates, similar survey data for 1980 must be compared to 1980 census counts of total, occupied, and vacant units. Example comparisons for Aberdeen, Arlington, and Ephrata, using Postal Vacancy Survey (PVS) data are provided in Table 1. These example comparisons show:

1. The proportion city housing represents of the housing included in the postal survey area is variable. For all housing types combined, these proportions range from 86.7 percent in Ephrata, to 24.4 percent in Arlington. If 50 percent or more of the housing units in the survey area are beyond the city limits, the validity of the survey data for trending current occupancy rates is highly questionable.

2. PVS occupancy rates are consistently higher than federal census occupancy rates. Higher PVS occupancy rates, when compared to census rates, are primarily due to the exclusion of dilapidated housing, and the inclusion of suburban housing in the survey coverage area.

3. Specific problems may exist for some cities that decrease the value of the survey data. For example, 1980 PVS housing counts for Aberdeen show 1,027 multi-unit structures. The 1980 census counts show 2,679. Many of the units counted by federal enumerators were dilapidated single-room apartments in the commercial core.

In sum, survey data from independent sources must be carefully examined to determine their utility in estimating current occupancy rates. If most of the surveyed units are in the city, and if there are no other apparent problems with the data, then the survey information should provide a good means of estimating current occupancy rates. A 1980 adjustment ratio (Column 6 in Table 1) is applied to current survey data to make the survey occupancy rate more consistent with census definitions and the city boundary. This adjusted survey occupancy rate is used in developing the population estimate.

B. Average Household Size Surveys

With the exception of the national Current Population Survey (CPS), conducted by the U.S. Department of Commerce, very few surveys collect information on average household size. National or regional average household size, or trends in household size, are not applicable to local jurisdictions. Special city census data for 1983 and 1984 indicate that overall household size has continued to decline, while national and regional CPS trends show household size to have stabilized.

II. Sample Surveys Conducted by Local Jurisdictions

The use of sample surveys to obtain household size ratios and vacancy rates for cities represents a means of obtaining a more accurate April 1 population estimate without incurring the cost of a 100 percent census. A survey should be conducted only if there is substantial evidence indicating a change in the occupancy rate since the last census, or a change in household size trends.

A. Sample Size and Sample Selection

A random sample is required. The sampling unit is the housing unit. The sample size must yield ± 1.5 percent error at the 95 percent confidence interval. These requirements are necessarily stringent as sample surveys, like special censuses, should be conducted with the intent to obtain precise information. Often, local jurisdictions undertake a survey because they feel OFM estimates are lower than their actual population. The survey results should always be sufficiently accurate to clearly resolve any disputed levels of current household size or occupancy rates.

Approximate sample size requirements for occupancy rates and for household size ratios are shown in Table 2 to 3. Samples selected to obtain persons per household for single family and multi-unit housing will generally be sufficient to obtain current occupancy rate data. In most cases, however, sampling requirements are so large, sample surveys are only cost effective for larger jurisdictions. When survey size requirements represent more than 50 percent of a jurisdiction's housing stock, an actual 100 percent count should be considered.

B. Selection of a Sample

Selection of a sample requires an address listing of all houses in a local jurisdiction, by housing type. If multi-unit structures have only one address, the number of units at each address must be known. Separate samples for single family units, and multi-units, are recommended. Independent samples enhance the utility of the survey.

Every nth housing unit on the address list will be selected depending on the size of the sample (e.g., a 20 percent sample would require selection of one of every five units).

The source of the address listing must be approved by OFM in advance, as some sources contain a bias. A biased sample will invalidate the confidence interval and expected sampling error. For example, samples

drawn from utility accounts do not provide an accurate representation of city housing stock in terms of federal census definitions. Specifically, vacant new constructions and vacant substandard housing may not be sufficiently represented in the billing account data. The account data may also contain commercial structures or other utility connections that are not housing units. Utility service areas often include houses outside the city.

Counts of housing units, by type, from the billing account (or other address source) in 1980 should be compared to 1980 census tabulations. Differences must be identified and corrected before the samples can be selected.

All units selected for inclusion in the sample must be identified by number. A copy of the address list of the selected units must be submitted to OFM before the survey begins. Once selected, each unit must be included in the sample, or a substitution must be justified. Unauthorized substitutions can cause bias in the results. Substitution is only allowed when a unit selected for inclusion is no longer a housing unit (e.g., commercial, demolished). The housing unit immediately preceding the invalid unit, or following the invalid unit, will alternately be selected for inclusion in the sample.

The vacancy status and/or household size of all unknown units discovered in the field will be determined. These units will be listed when the survey is complete, and every nth unit will be included in the sample. OFM staff are available for consultation to resolve problems at any time during the survey.

C. General Field Procedures

Standard census procedures must be used in obtaining household size and vacancy data. Copies of the Enumerator's Manual for field staff use will be furnished by OFM. This manual contains all standard census definitions and field procedures for verifying vacancies and determining the resident status of household population.

Enumerator assignments will be made in terms of blocks of units that are clustered geographically. For example, enumerator A will enumerate units 1 to 99, enumerator B will enumerate 100 to 199, etc. This facilitates the field work as well as field checking by OFM.

D. Submission of Results

Final survey results should be submitted to this office no later than the end of the first week of April. This is needed to allow field checking and verification of survey results.

Good communication with OFM staff in developing a representative address listing for the selection of sample, careful sample selection, and strict adherence to appropriate enumeration procedures will provide good survey data.

E. Informal Surveys Conducted by Local Jurisdictions

Informal surveys conducted by local jurisdications, in terms of acceptable standards, are treated like survey data from independent firms. Most informal occupancy surveys conducted by cities and towns produce inflated occupancy rates. Several factors contribute to this bias.

Informal surveys are typically conducted by phone, by mail, or by car. Telephone and mail out surveys obviously exclude all vacant new constructions and vacant dilapidated units. The results of these telephone and mail out surveys also tend to reflect the higher occupancy rates of large, easy-to-contact apartment complexes. Scattered, less attractive units, which tend to have lower occupancy rates, are not adequately represented.

Car surveys tend to undercount vacant dilapidated units, and exclude smaller apartments not visible from the street (garage/basements converted to living units).

We advise all local jurisdictions to contact the Office of Financial Management population staff before they expend any resources to

conduct informal surveys that may not be acceptable for use in determining population estimates.

Informal survey data can only be of value in trending current occupancy rates when similar survey data has been collected at the time of an actual enumeration. This allows comparison of the survey results to census counts and allows adjustment of survey results to match census definitions.

TABLE 1

COMPARISON OF 1980 POSTAL VACANCY SURVEY DATA[1] WITH 1980 CENSUS COUNTS FOR SELECTED CITIES STATE OF WASHINGTON

City	(1) 1980 Census Housing Units	(2) 1980 Postal Housing Units	(3)= (1)/(2) 1980 Census/ Postal Ratio	(4) 1980 Census Occupancy Ratio	(5) 1980 Postal Occupancy Ratio	(6)= (4)/(5) 1980 Adjustment Ratio
Aberdeen						
Total Housing Units	8,088	9,690	0.83467	0.93212	0.98689	0.94450
Single Family	5,220	8,125	0.64246	0.96686	0.98708	0.97952
Multi-units	2,679[2]	1,027	2.60857	0.86152	0.98832	0.87170
Mobile Home/Tr	189	538	0.35130	0.97354	0.98141	0.99198
Arlington						
Total Housing	1,300	5,336	0.24363	0.95077	0.97395	0.97620
Single Family	823	4,120	0.19976	0.98299	0.97063	1.01273
Multi-units	378	454	0.83260	0.89418	0.96916	0.92263
Mobile Home/Tr	99	762	0.12992	0.89899	0.99475	0.90373
Ephrata						
Total Housing	2,327	2,684	0.86699	0.91620	0.95343	0.96095
Single Family	1,765	1,999	0.88294	0.95184	0.97049	0.98078
Multi-units	430	412	1.04369	0.76512	0.84709	0.90323
Mobile Home/Tr	132	273	0.48352	0.93182	0.98901	0.94217

[1]Postal survey data has been adjusted to include new constructions. New constructions are not included in the PVS published vacancy rates.

[2]The Aberdeen census counts included many dilapidated, single room apartments above commercial structures.

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TABLE 2
AVERAGE HOUSEHOLD SIZE
RANDOM SAMPLE REQUIREMENTS

City Size	Total Units	Single Family	Multi-Units	Mobile Homes/ Trailers
Population of 5,000				
Housing Units	2,269	1,598	559	112
Sample Units	1,884	1,245	527	112
Percent	83.0	77.9	94.3	100.0
Population of 10,000				
Housing Units	4,356	3,178	1,016	162
Sample Units	3,131	2,068	901	162
Percent	71.9	65.1	88.7	100.0
Population of 20,000				
Housing Units	10,363	5,595	4,209	559
Sample Units	6,143	2,654	2,930	559
Percent	59.3	47.4	69.6	100.0
Population of 50,000				
Housing Units	23,740	14,688	8,458	594
Sample Units	9,664	4,463	4,607	594
Percent	40.7	30.4	54.5	100.0

TABLE 3
OCCUPANCY RATE
RANDOM SAMPLE REQUIREMENTS

City Size	Total Units	Single Family	Multi-Units	Mobile Homes/ Trailers
Population of 5,000				
Housing Units	2,269	1,598	559	112
Sample Units	1,041	530	399	112
Percent	45.9	33.2	71.4	100.0
Population of 10,000				
Housing Units	4,356	3,178	1,016	162
Sample Units	1,252	739	351	162
Percent	28.7	23.3	34.5	100.0
Population of 20,000				
Housing Units	10,363	5,595	4,209	559
Sample Units	2,578	822	1,197	559
Percent	24.9	14.7	28.4	100.0
Population of 50,000				
Housing Units	23,740	14,688	8,458	594
Sample Units	2,698	904	1,200	594
Percent	11.4	6.2	14.2	100.0

NOTE: Samples in Tables 2 and 3 yield a sampling error of ±5 percent at the 95 percent confidence interval. The formula and specific assumptions are available upon request.

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PERSONS OF SPANISH ORIGIN IN WASHINGTON STATE

by

Julie L. Baker and Theresa J. Lowe

The national decennial census of population and housing is the major source of information about persons of Spanish Origin in the State of Washington. The category, Spanish Origin, consists primarily of individuals who identified themselves as being Mexican, Cuban, Peurto Rican, or other Spanish/Hispanic descent. It is not a racial category.

Identifying changes in Washington's Hispanic population over the years is difficult because census information is not always comparable across time or by source. Differences in sample size, survey questions, and personal responses occur from decade to decade. Census data for the state indicate an increase of 122 percent in the number of Hispanic people from 57,358 in 1970 to 121,016 in 1980. By 1983 there were an estimated 127,094 Spanish persons in Washington. Is a change of this magnitude valid? During the 1970 decade there was an estimated net inmigration of 30,000 to 40,000 Spanish persons. Natural increase for this population group could easily account for the remaining growth. Better census coverage of the population, increased ethnic awareness, improved survey design, and a public relations campaign by the Federal Bureau of the Census may also add to the change in the number of Hispanic people between 1970 and 1983. Table 1 delineates this change by county.

Table 1 shows the number and percent change in Spanish Origin population by county from 1970 to 1983. Ranking the counties by population reveals a shift in the geographic dispersion of persons of Spanish Origin throughout the state. King, Yakima, Pierce and Snohomish counties consistently rank in the top five. Grant County dropped from fourth place in 1970 to sixth place in 1983. Franklin County rose from tenth place in 1970 to fourth place in 1983. For counties with relatively few Spanish persons, population change in terms of percent growth may be misleading. Small numbers tend to magnify percentages.

Table 2 shows the distribution of Spanish persons by race. Tables 3 and 4 provide a social and economic profile of Washington's Spanish Origin population. These data are summarized below.

- Spanish Origin is not a race category; it may be viewed as a nationality group. Persons of Spanish Origin may be of any race and are counted in the other racial categories. In 1980, 44.4 percent of the persons who indicated they were of Spanish Origin indentified themselves as being racially white; 47.6 percent selected the Other Races category. Very small percentages identified themselves as being black (1.3%), Indian (2.3%), or Asian (4.4%).

- Compared to the total population, the Hispanic population has a lower median income, and a higher percentage of persons in the labor force who are unemployed.

- A high percentage of the population of Spanish Origin, 22.4 percent, falls below the poverty level compared to 9.8 percent for the total population.

- Washington's Hispanic population is urban and young; 74 percent live in metropolitan areas, and 74 percent are under the age of thirty.

- The level of educational attainment for Hispanics 25 years and over is lower than for the total population.

TABLE 1

SPANISH ORIGIN POPULATION BY COUNTY
STATE OF WASHINGTON
1970, 1980, 1983

		1970 to 1980			1980 to 1983			1970 to 1983	
	1970 Population	1980 Population	Change	Percent Change	1983 Population	Change	Percent Change	Change	Percent Change
State	57,358	120,016	62,658	109.24	127,094	7,078	5.90	69,736	121.58
Adams	1,298	2,953	1,655	127.50	2,956	3	0.10	1,658	127.73
Asotin	79	157	78	98.73	164	7	4.46	85	107.59
Benton	1,538	4,598	3,060	198.96	4,842	244	5.31	3,304	214.82
Chelan	201	1,368	1,167	580.60	1,670	302	22.08	1,469	730.85
Clallam	195	647	452	231.79	643	-4	-0.62	448	229.74
Clark	819	3,059	2,240	273.50	3,327	268	8.76	2,508	306.23
Columbia	380	113	-267	-70.26	132	19	16.81	-248	-65.26
Cowlitz	518	1,067	549	105.98	1,068	1	0.09	550	106.18
Douglas	84	652	568	676.19	763	111	17.02	679	808.33
Ferry	28	61	33	117.86	63	2	3.28	35	125.00
Franklin	1,053	5,412	4,359	413.96	6,034	622	11.49	4,981	473.03
Garfield	0	6	6	—	7	1	16.67	7	—
Grant	3,180	5,469	2,289	71.98	5,655	186	3.40	2,475	77.83
Grays Harbor	507	870	363	71.60	870	0	0.00	363	71.60
Island	418	1,124	706	168.90	1,192	68	6.05	774	185.17
Jefferson	28	204	176	628.57	203	-1	-0.49	175	625.00
King	16,987	26,631	9,644	56.77	27,364	733	2.75	10,377	61.09
Kitsap	1,110	3,781	2,671	240.63	4,162	381	10.08	3,052	274.95
Kittitas	257	314	57	22.18	330	16	5.10	73	28.40
Klickitat	125	474	349	279.20	520	46	9.70	395	316.00
Lewis	77	680	603	783.12	698	18	2.65	621	806.49
Lincoln	76	74	-2	-2.63	74	0	0.00	-2	-2.63
Mason	156	432	276	176.92	482	50	11.57	326	208.97
Okanogan	118	626	508	430.51	735	109	17.41	617	522.88
Pacific	101	172	71	70.30	185	13	7.56	84	83.17
Pend Oreille	19	102	83	436.84	108	6	5.88	89	468.42
Pierce	7,493	12,892	5,399	72.05	13,294	402	3.12	5,801	77.42
San Juan	0	50	50	-	54	4	8.00	54	—
Skagit	1,050	2,008	958	91.24	2,064	56	2.79	1,014	96.57
Skamania	11	81	70	636.36	80	-1	-1.23	69	627.27
Snohomish	2,616	5,440	2,824	107.95	5,680	240	4.41	3,064	117.13
Spokane	2,346	4,811	2,465	105.07	4,803	-8	-0.17	2,457	104.73
Stevens	118	310	192	162.71	304	-6	-1.94	186	157.63
Thurston	556	2,577	2,021	363.49	2,710	133	5.16	2,154	387.41
Wahkiakum	8	78	70	875.00	72	-6	-7.69	64	800.00
Walla Walla	873	2,572	1,699	194.62	2,670	98	3.81	1,797	205.84
Whatcom	775	2,065	1,290	166.45	2,208	143	6.92	1,433	184.90
Whitman	353	631	278	78.75	615	-16	-2.54	262	74.22
Yakima	11,805	25,455	13,650	115.63	28,293	2,838	11.15	16,488	139.67

NOTES:

In 1970, the state Spanish Origin population was developed from a 5 percent sample. Data were not available by county. The state Spanish Origin population was distributed to the counties on the basis of 1970 Spanish Language data. The sum of 1970 numbers does not equal the state total due to rounding.

The 1983 estimates of the Spanish Origin population were developed from 1983 estimates of the state population by racial categories: the 1980 number of Spanish Origin persons in each category was divided by the racial category total. These proportions were applied to the 1983 racial category estimates and summed to derive an estimate of the total Spanish Origin population.

TABLE 2
1980 CENSUS COUNTS[1] OF SPANISH ORIGIN[2] POPULATION BY BUREAU OF THE CENSUS RACIAL CATEGORIES BY COUNTY STATE OF WASHINGTON

	Total Spanish Origin	Percent	Whites of Spanish Origin	Percent	Blacks of Spanish Origin	Percent	Indians of Spanish Origin	Percent	Asians of Spanish Origin	Percent	Others[3] of Spanish Origin	Percent
Washington	120,016	100	53,292	44.4041	1,575	1.3123	2,710	2.2580	5,313	4.4269	57,126	47.5987
Adams	2,953	100	1,206	40.8398	4	0.1355	14	0.4741	4	0.1355	1,725	58.4152
Asotin	157	100	109	69.4268	0	0.0000	3	1.9108	2	1.2739	43	27.3885
Benton	4,598	100	1,672	36.3636	6	0.1305	34	0.7395	43	0.9352	2,843	61.8312
Chelan	1,368	100	657	48.0263	2	0.1462	30	2.1930	11	0.8041	668	48.8304
Clallam	647	100	434	67.0788	2	0.3091	29	4.4822	18	2.781	164	25.3478
Clark	3,059	100	1,904	62.2426	12	0.3923	63	2.0595	150	4.9036	930	30.4021
Columbia	113	100	39	34.5133	0	0.0000	6	5.3097	2	1.7699	66	58.4071
Cowlitz	1,067	100	682	63.9175	3	0.2812	49	4.5923	56	5.2484	277	25.9606
Douglas	652	100	377	57.8221	0	0.0000	6	0.9202	3	0.4601	266	40.7975
Ferry	61	100	37	60.6557	0	0.0000	8	13.1148	0	0.0000	16	26.2295
Franklin	5,412	100	2,523	46.6186	11	0.2033	15	0.2772	12	0.2217	2,851	52.6792
Garfield	6	100	3	50.0000	0	0.0000	0	0.0000	0	0.0000	3	50.0000
Grant	5,469	100	2,207	40.3547	14	0.2560	45	0.8228	17	0.3108	3,186	58.2556
Grays Harbor	870	100	533	61.2644	4	0.4598	62	7.1264	47	5.4023	224	25.7471
Island	1,124	100	536	47.6868	13	1.1566	21	1.8683	245	21.7972	309	27.4911
Jefferson	204	100	136	66.6667	2	0.9804	20	9.8039	1	0.4902	45	22.0588
King	26,631	100	14,286	53.6442	725	2.7224	751	2.8200	2,346	8.8093	8,523	32.0041
Kitsap	3,781	100	1,931	51.0711	50	1.3224	91	2.4068	639	16.9003	1,070	28.2994
Kittitas	314	100	180	57.3248	10	3.1847	13	4.1401	6	1.9108	105	33.4395
Klickitat	474	100	229	48.3122	0	0.0000	6	1.2658	7	1.4768	232	48.9451
Lewis	680	100	437	64.2647	3	0.4412	33	4.8529	11	1.6176	196	28.8235
Lincoln	74	100	46	62.1622	0	0.0000	10	13.5135	4	5.4054	14	18.9189
Mason	432	100	236	54.6296	0	0.0000	24	5.5556	18	4.1667	154	35.6481
Okanogan	626	100	207	33.0671	0	0.0000	48	7.6677	6	0.9585	365	58.3067
Pacific	172	100	85	49.4186	0	0.0000	14	8.1395	8	4.6512	65	37.7907
Pend Oreille	102	100	74	72.5490	1	0.9804	10	9.8039	0	0.0000	17	16.6667
Pierce	12,892	100	5,940	46.0751	493	3.8241	394	3.0562	942	7.3069	5,123	39.7378
San Juan	50	100	42	84.0000	0	0.0000	1	2.0000	0	0.0000	7	14.0000
Skagit	2,008	100	715	35.6076	0	0.0000	35	1.7430	6	0.2988	1,252	62.3506
Skamania	81	100	54	66.6667	0	0.0000	5	6.1728	0	0.0000	22	27.1605
Snohomish	5,440	100	3,328	61.1765	71	1.3051	151	2.7757	225	4.1360	1,665	30.6066
Spokane	4,811	100	3,051	63.4172	67	1.3926	163	3.3881	136	2.8269	1,394	28.9753
Stevens	310	100	143	46.1290	0	0.0000	49	15.8065	4	1.2903	114	36.7742
Thurston	2,577	100	1,459	56.6162	17	0.6597	98	3.8029	127	4.9282	876	33.9930
Wahkiakum	78	100	33	42.3077	0	0.0000	1	1.2821	0	0.0000	44	56.4103
Walla Walla	2,572	100	690	26.8274	7	0.2722	18	0.6998	21	0.8165	1,836	71.3841
Whatcom	2,065	100	1,050	50.8475	9	0.4358	78	3.7772	48	2.3245	880	42.6150
Whitman	631	100	360	57.0523	6	0.9509	9	1.4263	28	4.4374	228	36.1331
Yakima	25,455	100	5,661	22.2392	43	0.1689	303	1.1903	120	0.4714	19,328	75.9301

[1]1980 Federal Bureau of the Census Summary Tape File 2(STF2) total counts.

[2]Spanish Origin is not a race category; it may be viewed as a nationality group. Persons of Spanish Origin may be of any race and are counted in the other racial categories shown. In 1980, 44.4 percent of the persons who indicated they were of Spanish Origin identified themselves as being racially White; 47.6 percent selected the Other Races category. Very small percentages identified themselves as being Black (1.3%), Indian (2.3%) or Asian (4.4%).

[3]The Other Races category is primarily a count of persons who marked "Other Race" on the 1980 census questionnaire and wrote in entries such as Cuban, Puerto Rican, Latino, Mexican, Dominican, etc. They represent persons who when given an opportunity to identify themselves in a racial category did not select White (or any other category provided), but specifically identified themselves as being Mexican, Puerto Rican, Latino, etc. In 1980 this category represented a tabulation of 67,154 Spanish persons who considered themselves racially Spanish and some 9,402 additional responses that could not be elsewhere classified.

TABLE 3

SOCIAL AND ECONOMIC CHARACTERISTICS OF THE SPANISH ORIGIN POPULATION 1980 FEDERAL CENSUS

	Spanish Origin Population 1980	Total Population
Median Income[1]	$14,993	$21,696
In Poverty[2]	22.4%	9.8%
Unemployed[3]	34.7%	22.6%
Completed High School[4]	55.5%	77%
Completed College (4 Years)[4]	10.8%	19%
Urban	74%	74%
Rural	26%	26%
Median Age	20.9	29.8

[1]Income is the sum of the separate amounts reported for wages, non-farm self employment income, net farm self employment income, interest, dividend, net royalty or rental income public assistance, and all other income. It does not include receipts from property sales, income in-kind, bank withdrawls, tax refunds, exchange money among relatives in the same household, money borrowed, gifts, and other lump sum receipts.

[2]Poverty levels are defined by family size and age according to the national poverty thresholds. The average poverty threshold for a family of four in 1979 was $7,412.

[3]The labor force includes all persons 16 years old. Persons over 16 are classified as unemployed if they are not at work during the reference week; were looking for work during the last four weeks; or were available to accept a job.

[4]Educational attainment for persons age 25 and over.

Source: U.S. Department of Commerce, Bureau of the Census. Characteristics of Population: Detailed Population Characteristics, Washington, 1980 Census, PC80-1-D49

TABLE 4

SPANISH ORIGIN POPULATION
BY SELECTED AGE GROUPS
1980 FEDERAL CENSUS

Age Group	Spanish Origin Population		Total Population	
	Number	Percent	Number	Percent
under 10	31,266	25.78	601,376	14.55
10 - 19	26,464	21.81	691,109	16.73
20 - 29	27,899	23.00	790,822	19.14
30 - 39	16,173	13.33	629,218	15.23
40 - 49	8,679	7.16	405,846	9.82
50 - 59	5,964	4.92	403,798	9.77
60 - 69	2,755	2.27	329,562	7.98
70 - over	2,086	1.72	280,425	6.79

Source: U.S. Department of Commerce, Bureau of the Census. Characteristics of the Population: General Social and Economic Characteristics. Washington, 1980 Census of Population, PC80-1-C49

MILITARY POPULATION IN WASHINGTON STATE

By
Felix D'Allesandro

INTRODUCTION

The growth of the population in Washington State over the next ten years is expected to be significantly impacted by the size and composition of the military subpopulation. The military subpopulation is composed of members of the armed forces, their dependents, and other persons living with them. The tables published in this report provide detailed information for the armed forces that may be used by persons assessing the overall impact of anticipated military increases in Washington.

The information provided has been extracted from 1980 federal census sample counts. These data have not been adjusted to match corresponding total count tabulations published by the Bureau of the Census. Differences are minor. The primary data source is discussed below.

I. DATA SOURCE: THE PUBLIC USE SAMPLE

Military data for this report are derived from the 1980 Census of Population and Housing Public Use Microdata Sample A for Washington State. The microdata file is a stratified sample of the population, actually a subsample of the full census sample (19.4 percent of all households) that received census long-form questionnaires.

Sample A of the microdata sample was used. The A sample includes over one-fourth of the Washington households that received the long-form questionnaire. The weighting scheme used for the A sample allows the user to estimate the frequency of a particular characteristic for the entire population by tallying records from the microdata files and multiplying the result by the inverse of the sampling rate (e.g., mulitplying raw counts from the five percent sample by twenty). Most differences between frequencies derived from the public use tapes and the printed volumes of the Census Bureau may be attributed to sampling error. In some of the tables, where cross classification is used, the estimated entries are small; small entries should be interpreted cautiously.

II. COMPOSITION OF THE MILITARY POPULATION

Tables 1 through 9 present data detailing the age, sex, race and labor force status of the military population, and those persons residing in their households.

A. The Changing Age and Sex Structure

Tables 1 to 3 present a set of intercensal age by sex estimates for military personnel. Annual estimates of the state's total military population were developed from station strength counts provided by the Department of Defense, and individual reports from the major military installations in Washington. The age-sex detail was developed by interpolation, using 1970 and 1980 census armed forces counts, by age and sex. Highlights from these tables are as follows:

- The number of military personnel declined over the decade. The 53,268 armed forces personnel estimated to have been here on April 1, 1980, is 12 percent less than the number here on April 1, 1970. The proportion of the state's population serving in the armed forces also declined over the decade, from 1.8 percent in 1970, to 1.3 percent in 1980.

- While the number of male military personnel declined during the 1970s by 16 percent from 59,397 to 46,699, the number of females increased from 1,088 to 3,569.

- The sex ratio has changed from 5,459 males per one hundred females in 1970 to 1,392 in 1980, a decrease of nearly 75 percent. This decrease, coupled with the increase in military women, has led to a proportinate gain in women to total military personnel; i.e., in 1970 women were 1.8 percent of the military in Washington; by 1980 they were 6.7 percent.

- The overall age structure of the military in Washington has shifted substantially during the decade. In 1970, the median age was 21.4 years; by 1980 the median age had increased to 23.4 years.

- Again, the age structure changes differed markedly for the men relative to the women. The median age for the men increased over the decade by over 2 years, standing at 23.5 years in 1980. The women gained less than a year on their 1970 median age, calculated at 22.6 in 1980. It is estimated that median age of the men was greater than that of the women for the first time in 1976, reversing a long-term trend.

B. Detail on the Military Population in 1980

Tables 4 to 9 present labor force status, by race, for the military population and those persons living with them. The labor force status of the adults residing in the military households should be of great interest to community planners. Host communities are not only responsible for the accommodation of the military men and women, but also for the persons in their households. The data were derived from the 1980 Census Public Use Microdata Sample. The military households were selected based on the coded response to the labor force question. If any member of a household indicated active military status, that person and all persons in that household were coded as part of the military population. This procedure would allow some persons who are not properly dependents to be included in the dependent population.

- The military personnel are heavily concentrated in the age range 18 to 37. Their children tend to be under ten years old. There is a definite scarcity of teenagers in the military population. There are not many persons over 40 living with military personnel.

- The racial composition of the military is quite different than that of the state in general. The following figures highlight this difference.

	Percent Distribution		
	Washington State 1980	Military Population 1980	Difference
White	91.3	78.2	13.1
Black	2.6	11.4	-8.8
Native American	1.5	1.2	0.3
Asian	2.7	6.2	-3.5
Other	1.9	3.0	-1.1

III. HOUSING THE MILITARY POPULATION

In this section, data are presented that will be of use to planners and officials who must assess the impact of additional military households. Table 10 presents information on armed forces personnel classified by the type of quarters in which they reside.

The data on housing in Table 10 is cross-classified by the military member's status in the household. The status of householder is given to that person in whose name the unit is either owned or rented. All other household members are classified on the basis of their relationship to the householder.

Table 11 provides further detail on those living in housing units that are in the community or on base. In this table the data are sorted by the number of units in the structure, with attention given to the number of persons living in each unit. Information provided by these data is summarized below.

- The majority, 42 percent, of the armed forces personnel live in barracks or on ships. Those living in the community are most likely to be renting their quarters. Base housing accounts for only 3.6 percent of the military households.

- Women in the armed forces tend to rent off station housing to a greater degree than do the men. Women are not often found living in base housing.

- An overwhelming majority, 83 percent, of the armed forces personnel in households are classified as a householder (household head). The status

of householder is mainly claimed by men, it is also also claimed by 36 percent of the women. Nearly 46 percent of military women in households claim the status of spouse, as compared with only 3 percent of the males.

- Over 2,300 personnel have the status of boarder, roommate, and non-relative. Most of these people live in rented off station housing.

- In 1980, the mean household size for the armed forces (not in group quarters) was 3.27. For the state the mean was 2.61.

- Personnel were most likely to be living in a single unit structure. Nearly 55 percent of the armed forces personnel (not living in group quarters) either owned or rented a one unit place. The mean household size for one unit structures was 3.57 persons per household.

IV. EDUCATION AND THE MILITARY POPULATION

Data on school enrollment and educational attainment, by age, are being presented to aid educational planners and others who must provide educational programs to accommodate the military population.

A. School Enrollment

Data on school enrollment has typically been used to measure the extent of participation in the school systems of an area by persons of school age, the potential future participation of such persons, and the relative participation of different segments of the population. The enrollment data also allow an examination of educational progression. That is, they provide a basis for determining to what extent population groups persist in school and to what extent continuation in school is related to normal grade progression.

Table 12 shows military dependents enrolled and attending school, by age, in 1980. Findings are summarized below.

- The relative youth of military couples is reflected in the proportionately higher enrollment in grades K-6 as compared to the enrollment pattern of the general state population. An index of dissimilarity indicates that the distribution of military children is nearly 20 percent more concentrated in K-6 than the state's population.

- The median age of military dependent enrollees is slightly, and probably not significantly, below that of the children throughout the state. This is somewhat surprising in light of the transiency of the mililtary household, which would lead to an expectation of discontinuous schooling and a falling behind.

- The median grade for those attending school is another indication of the youthfulness of the military population. The median for all those in the state attending school is 7.2 while, for the military dependents attending school, it is 4.1.

- An examination of the percent of each age group enrolled finds the military tending to be more heavily enrolled up through the beginning of 10th grade, age 15. Thereafter, the rate of enrollment of military dependents falls off much quicker than the fall off of students throughout the state.

B. Educational Attainment

Data on educational attainment (i.e., highest grade completed) has taken the place of the literacy question asked in prior censuses. This information has often been used by students in the education community to select target groups, such as those who have not completed high school, and develop special programs to meet their needs. Educational attainment has also been shown to have strong correspondence to a person's social and economic needs and desires. Therefore, data on educational attainment should provide planners with an idea of the types of services and distribution systems most likely to appeal to the military population.

The data on school years completed were tabulated on the basis of a respondent's answers to the question on highest grade attended and whether or not this grade was completed. Two special provisions were made to be consistent with the spirit of the question. Those persons who had passed a high school equivalency examination were marked '12' under the highest grade attended (if they had not completed nor enrolled in a higher grade). Schooling received in foreign schools was to be reported as the equivalent grade or year in the regular American school system.

Tables 13 and 14 present the data on highest grade attended and completed. The following summary table is presented to give some perspective to the data.

Percent Completion, by Level of Schooling, for Members of the Armed Forces, Military Dependents with Completed Schooling, and for the total State Population.

	Less Than High School	High School	College
Members of Armed Forces	13.04	75.35	11.61
Dependents Not Attending School	19.92	68.59	11.49
Washington State	12.10	72.50	15.40

The data on educational attainment should be interpreted with caution. There is evidence of considerable misreporting of highest grade, or year of school, completed.

TABLE 1
THE AGE STRUCTURE OF ALL MILITARY PERSONNEL, STATE OF WASHINGTON, 1970-1980

Age	1970 Census	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 Census
16	1	2	2	3	4	5	6	7	8	9	10
17	877	848	604	564	587	610	586	555	485	431	399
18	2529	2554	1906	1871	2056	2263	2319	2357	2227	2162	2208
19	6987	6846	4948	4697	4978	5273	5185	5043	4536	4192	4050
20	8594	8435	6108	5809	6171	6553	6461	6303	5698	5277	5121
21	8305	8187	5955	5693	6080	6496	6447	6336	5775	5397	5291
22	6684	6611	4827	4632	4968	5332	5319	5255	4823	4532	4476
23	4196	4261	3198	3159	3492	3867	3987	4078	3875	3790	3898
24	2562	2667	2051	2075	2349	2665	2812	2944	2861	2866	3015
25	1831	1960	1548	1606	1861	2159	2327	2485	2454	2510	2687
26	1655	1757	1377	1419	1634	1883	2019	2145	2118	2146	2287
27	1303	1393	1099	1139	1318	1527	1645	1756	1734	1771	1894
28	1115	1181	924	950	1091	1256	1344	1425	1407	1422	1513
29	1088	1156	906	934	1076	1241	1331	1415	1397	1416	1510
30	985	1053	830	860	995	1153	1241	1324	1314	1335	1428
31	1006	1076	849	881	1020	1183	1274	1360	1349	1373	1469
32	931	997	787	817	946	1097	1183	1264	1252	1276	1366
33	919	980	771	796	920	1064	1143	1218	1209	1224	1307
34	592	631	497	514	593	686	738	786	781	790	844
35	959	993	760	766	863	974	1024	1067	1038	1031	1080
36	1041	1078	825	830	935	1055	1109	1156	1123	1115	1168
37	994	1030	788	794	894	1010	1062	1107	1077	1069	1120
38	693	718	549	553	623	704	740	771	749	744	780
39	588	609	466	470	530	598	629	656	637	633	664
40	658	678	517	518	581	654	684	710	688	680	710
41	423	436	332	333	373	419	438	455	440	435	454
42	521	537	409	410	460	516	540	561	543	537	560
43	188	194	147	148	165	186	194	202	194	193	201
44	246	253	193	193	217	244	255	264	256	253	264
45	253	255	190	186	204	224	229	232	219	212	216
46	278	280	208	204	224	246	251	254	240	232	236
47	253	255	190	186	204	224	228	232	219	211	215
48	154	155	116	113	124	136	139	141	133	129	131
49	101	102	76	75	83	91	94	95	90	88	90
50-59	726	718	524	503	540	580	578	571	520	493	487
60+	249	241	172	162	169	176	170	162	141	127	119
Total	60485	61130	45650	44860	49330	54350	55730	56690	53610	52100	53268
Median Age	21.4	21.6	21.7	21.8	22.0	22.2	22.4	22.6	22.8	23.1	23.4

TABLE 2
THE AGE STRUCTURE OF MILITARY MEN, STATE OF WASHINGTON, 1970-1980

Age	1970 Census	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 Census
16	1	2	2	3	4	5	6	7	8	9	10
17	867	836	593	552	572	591	564	531	462	405	370
18	2465	2481	1844	1804	1975	2165	2209	2236	2113	2033	2067
19	6820	6652	4783	4515	4756	5004	4883	4707	4220	3831	3653
20	8439	8253	5953	5638	5960	6296	6172	5982	5394	4930	4739
21	8221	8069	5842	5557	5903	6268	6180	6029	5477	5047	4898
22	6601	6508	4734	4527	4835	5167	5129	5041	4618	4296	4213
23	4117	4158	3102	3046	3347	3684	3774	3836	3641	3519	3594
24	2508	2591	1978	1987	2234	2516	2638	2744	2666	2637	2758
25	1797	1895	1476	1511	1731	1984	2116	2238	2210	2220	2356
26	1641	1731	1348	1380	1580	1812	1932	2043	2017	2026	2151
27	1281	1351	1052	1077	1234	1415	1509	1596	1575	1583	1680
28	1109	1170	911	933	1068	1225	1306	1381	1364	1370	1454
29	1078	1137	885	907	1038	1190	1269	1342	1325	1331	1413
30	966	1028	808	834	963	1112	1194	1271	1262	1275	1361
31	980	1043	820	846	976	1128	1211	1289	1280	1293	1380
32	899	957	752	776	896	1035	1111	1183	1175	1187	1267
33	913	972	763	788	909	1050	1128	1200	1192	1204	1285
34	591	629	494	510	589	680	730	777	772	780	832
35	957	990	757	761	857	966	1014	1056	1027	1017	1065
36	1027	1062	812	817	919	1037	1088	1133	1103	1092	1143
37	992	1026	784	789	888	1001	1051	1095	1065	1055	1104
38	679	702	537	540	608	685	719	749	728	721	755
39	574	594	454	457	514	580	608	634	616	610	639
40	646	666	508	509	572	643	673	699	679	670	700
41	411	424	323	324	364	409	428	445	431	426	445
42	509	525	400	401	450	506	530	551	534	528	551
43	176	182	138	139	156	175	184	191	185	183	191
44	235	242	185	185	208	234	245	254	246	243	254
45	248	250	186	182	199	218	223	226	213	205	209
46	273	275	204	200	219	240	245	248	235	226	230
47	248	250	186	182	199	218	223	226	213	205	209
48	149	150	111	109	119	131	134	135	128	123	125
49	99	100	74	73	80	87	89	91	86	83	84
50-59	657	647	470	449	479	511	507	497	455	422	413
60+	223	216	154	143	149	155	149	141	123	109	101
Total	59397	59763	44425	43451	47549	52125	53173	53801	50841	48895	49699
Median Age	21.4	21.6	21.7	21.8	22.0	22.2	22.4	22.6	22.9	23.1	23.5

Source: Census of Population, 1970, 1980.
Note: Sampling variability is responsible for inconsistencies between tables.

TABLE 3
THE AGE STRUCTURE OF MILITARY WOMEN, STATE OF WASHINGTON, 1970-1980

Age	1970 Census	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 Census
16	0	0	0	0	0	0	0	0	0	0	0
17	10	12	11	12	15	19	21	24	23	26	29
18	64	73	61	67	81	98	109	121	113	129	141
19	167	194	165	181	222	269	303	335	316	361	397
20	155	182	155	172	210	257	289	321	303	347	382
21	84	118	113	136	178	228	267	307	298	349	393
22	83	103	92	105	133	165	190	214	205	236	263
23	79	104	96	113	145	183	212	242	233	272	304
24	54	76	73	88	116	149	174	201	195	228	257
25	34	65	72	95	131	174	211	247	245	291	331
26	14	27	30	39	54	72	87	102	101	119	136
27	22	42	47	61	85	113	136	160	158	188	214
28	6	12	13	17	23	31	38	44	44	52	59
29	10	19	21	28	38	51	62	73	72	85	97
30	19	24	22	26	33	41	47	54	52	60	67
31	26	33	30	35	44	55	63	72	69	80	89
32	32	40	35	40	50	63	72	81	77	89	99
33	6	8	7	8	11	13	15	18	17	20	22
34	1	2	2	3	5	6	8	9	9	11	12
35	2	3	4	5	6	8	10	11	11	13	15
36	14	15	13	13	16	19	20	22	21	23	25
37	2	3	4	5	7	9	10	12	12	14	16
38	14	15	13	13	16	19	20	22	21	23	25
39	14	15	13	13	16	19	20	22	21	23	25
40	12	12	9	9	10	11	11	11	9	10	10
41	12	12	9	9	9	10	10	10	9	9	9
42	12	12	9	9	9	10	10	10	9	9	9
43	12	12	9	9	10	11	11	11	9	10	10
44	11	11	8	8	9	10	10	11	9	10	10
45	5	5	4	4	5	6	6	7	6	7	7
46	5	5	4	4	5	5	6	6	5	6	6
47	5	5	4	4	5	5	6	6	5	6	6
48	5	5	4	4	5	5	6	6	5	6	6
49	2	2	2	2	3	4	4	5	5	5	6
50-59	69	71	54	54	61	68	71	74	66	71	74
60+	26	26	19	18	20	21	21	21	18	18	18
Total	1088	1367	1225	1409	1781	2225	2557	2889	2769	3205	3569
Median Age	21.7	22.0	22.2	22.3	22.4	22.4	22.5	22.5	22.5	22.6	22.6

Source: Census of Population, 1970, 1980.
Note: Sampling variability is responsible for inconsistencies between tables.

TABLE 4
AGE, SEX, AND LABOR FORCE STATUS FOR ALL MILITARY PERSONNEL AND PERSONS RESIDING WITH THEM, STATE OF WASHINGTON, 1980

Age	Armed Forces		Children		Employed		Unemployed		N.I.L.F.		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
0	0	0	2060	1900	0	0	0	0	0	0	2060	1900	3960
1	0	0	1260	1480	0	0	0	0	0	0	1260	1480	2740
2	0	0	1440	1360	0	0	0	0	0	0	1440	1360	2800
3	0	0	1280	1540	0	0	0	0	0	0	1280	1540	2820
4	0	0	1020	1160	0	0	0	0	0	0	1020	1160	2180
5	0	0	1300	1120	0	0	0	0	0	0	1300	1120	2420
6	0	0	920	960	0	0	0	0	0	0	920	960	1880
7	0	0	960	720	0	0	0	0	0	0	960	720	1680
8	0	0	860	1160	0	0	0	0	0	0	860	1160	2020
9	0	0	960	820	0	0	0	0	0	0	960	820	1780
10	0	0	1080	700	0	0	0	0	0	0	1080	700	1780
11	0	0	940	620	0	0	0	0	0	0	940	620	1560
12	0	0	800	520	0	0	0	0	0	0	800	520	1320
13	0	0	540	740	0	0	0	0	0	0	540	740	1280
14	0	0	600	660	0	0	0	0	0	0	600	660	1260
15	0	0	560	420	0	0	0	0	0	0	560	420	980
16	20	0	0	0	120	80	100	20	400	520	640	620	1260
17	320	40	0	0	280	60	80	100	300	320	980	520	1500
18	1840	200	0	0	120	260	60	120	180	420	2200	1000	3200
19	3440	420	0	0	100	360	40	80	60	540	3640	1400	5040
20	4960	300	0	0	140	380	60	180	80	640	5240	1500	6740
21	4800	360	0	0	120	520	0	160	40	860	4960	1900	6860
22	4800	300	0	0	40	340	20	40	20	780	4880	1460	6340
23	3240	300	0	0	120	540	80	120	40	740	3480	1700	5180
24	3020	240	0	0	40	580	0	100	20	640	3080	1560	4640
25	2300	340	0	0	60	640	20	100	0	500	2380	1580	3960
26	2100	140	0	0	140	480	60	100	0	560	2300	1280	3580
27	1640	220	0	0	80	420	0	120	0	660	1720	1420	3140
28	1420	60	0	0	60	360	20	40	20	500	1520	960	2480
29	1380	100	0	0	20	480	0	140	0	500	1400	1220	2620
30	1440	60	0	0	60	460	0	20	0	420	1500	960	2460
31	1460	80	0	0	40	500	0	140	0	560	1500	1280	2780
32	1340	100	0	0	60	800	0	60	0	280	1400	1240	2640
33	1360	20	0	0	40	300	0	60	0	380	1400	760	2160
34	880	0	0	0	20	400	20	20	0	300	920	720	1640
35	1100	0	0	0	40	440	0	20	0	220	1140	680	1820
36	1180	20	0	0	20	520	0	20	20	260	1220	820	2040
37	1140	0	0	0	20	300	0	60	0	220	1160	580	1740
38	780	20	0	0	20	280	0	80	0	120	800	500	1300
39	660	20	0	0	20	100	0	40	0	80	680	240	920
40	660	0	0	0	20	200	0	20	20	240	700	460	1160
41	420	0	0	0	40	240	0	40	0	200	460	480	940
42	520	0	0	0	20	160	0	60	0	80	540	300	840
43	180	0	0	0	40	80	0	0	0	80	220	160	380
44	240	0	0	0	40	140	0	20	0	120	280	280	560
45	200	0	0	0	20	140	0	0	0	80	220	220	440
46	220	0	0	0	0	80	0	0	0	80	220	160	380
47	200	0	0	0	80	100	0	20	0	40	280	160	440
48	120	0	0	0	60	20	0	0	0	60	180	80	260
49	80	0	0	0	0	0	0	0	0	60	80	60	140
50 to 59	420	80	0	0	200	360	0	20	40	400	660	860	1520
60+	120	40	0	0	60	40	0	0	160	400	340	480	820
Total	50000	3460	16580	15880	2360	11160	560	2120	1400	12860	70900	45480	116380

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.
Note: Sampling variability is responsible for inconsistencies between tables.

TABLE 5
AGE, SEX, AND LABOR FORCE STATUS FOR WHITE MILITARY PERSONNEL AND PERSONS RESIDING WITH THEM, STATE OF WASHINGTON, 1980

Age	Armed Forces		Children		Employed		Unemployed		N.I.L.F.		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
0	0	0	1700	1500	0	0	0	0	0	0	1700	1500	3200
1	0	0	980	1180	0	0	0	0	0	0	980	1180	2160
2	0	0	1140	1080	0	0	0	0	0	0	1140	1080	2220
3	0	0	900	1240	0	0	0	0	0	0	900	1240	2140
4	0	0	740	960	0	0	0	0	0	0	740	960	1700
5	0	0	1080	820	0	0	0	0	0	0	1080	820	1900
6	0	0	640	800	0	0	0	0	0	0	640	800	1440
7	0	0	800	560	0	0	0	0	0	0	800	560	1360
8	0	0	560	920	0	0	0	0	0	0	560	920	1480
9	0	0	800	660	0	0	0	0	0	0	800	660	1460
10	0	0	920	560	0	0	0	0	0	0	920	560	1480
11	0	0	760	520	0	0	0	0	0	0	760	520	1280
12	0	0	720	460	0	0	0	0	0	0	720	460	1180
13	0	0	400	640	0	0	0	0	0	0	400	640	1040
14	0	0	460	620	0	0	0	0	0	0	460	620	1080
15	0	0	460	300	0	0	0	0	0	0	460	300	760
16	20	0	0	0	120	60	100	20	360	420	600	500	1100
17	300	40	0	0	260	60	80	80	200	320	840	500	1340
18	1400	120	0	0	120	240	60	60	160	360	1740	780	2520
19	2260	360	0	0	80	300	20	60	40	460	2400	1180	3580
20	3540	180	0	0	140	280	60	160	60	540	3800	1160	4960
21	3280	260	0	0	100	420	0	80	40	740	3420	1500	4920
22	3480	260	0	0	20	240	20	20	20	680	3540	1200	4740
23	2400	200	0	0	60	460	80	120	40	580	2580	1360	3940
24	2200	220	0	0	20	400	0	60	20	380	2240	1060	3300
25	1840	260	0	0	20	580	20	0	0	380	1880	1220	3100
26	1700	120	0	0	140	360	40	60	0	480	1880	1020	2900
27	1360	100	0	0	40	320	0	100	0	560	1400	1080	2480
28	1080	40	0	0	60	280	0	20	0	360	1140	700	1840
29	980	60	0	0	20	380	0	40	0	400	1000	880	1880
30	1160	60	0	0	40	320	0	20	0	340	1200	740	1940
31	1240	80	0	0	40	360	0	100	0	480	1280	1020	2300
32	1200	80	0	0	60	640	0	40	0	200	1260	960	2220
33	1180	20	0	0	40	280	0	40	0	280	1220	620	1840
34	720	0	0	0	20	340	0	0	0	240	740	580	1320
35	940	0	0	0	40	360	0	0	0	220	980	580	1560
36	980	20	0	0	20	440	0	20	20	200	1020	680	1700
37	1040	0	0	0	0	220	0	20	0	200	1040	440	1480
38	660	20	0	0	20	220	0	80	0	100	680	420	1100
39	500	20	0	0	20	60	0	40	0	80	520	200	720
40	480	0	0	0	20	140	0	20	20	180	520	340	860
41	300	0	0	0	40	180	0	40	0	180	340	400	740
42	440	0	0	0	20	140	0	60	0	60	460	260	720
43	120	0	0	0	40	40	0	0	0	80	160	120	280
44	240	0	0	0	40	100	0	20	0	100	280	220	500
45	140	0	0	0	20	120	0	0	0	40	160	160	320
46	200	0	0	0	0	60	0	0	0	40	200	100	300
47	180	0	0	0	60	60	0	20	0	40	240	120	360
48	120	0	0	0	60	20	0	0	0	60	180	80	260
49	80	0	0	0	0	0	0	0	0	60	80	60	140
50 to 59	360	80	0	0	200	300	0	0	40	320	600	700	1300
60+	100	40	0	0	40	40	0	0	160	240	300	320	620
Total	38220	2640	13060	12820	2040	8820	480	1400	1180	10400	54980	36080	91060

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.
Note: Sampling variability is responsible for inconsistencies between tables.

TABLE 6
AGE, SEX, AND LABOR FORCE STATUS FOR BLACK MILITARY PERSONNEL AND PERSONS RESIDING WITH THEM, STATE OF WASHINGTON, 1980

Age	Armed Forces		Children		Employed		Unemployed		N.I.L.F.		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
0	0	0	180	260	0	0	0	0	0	0	180	260	440
1	0	0	60	180	0	0	0	0	0	0	60	180	240
2	0	0	100	100	0	0	0	0	0	0	100	100	200
3	0	0	160	220	0	0	0	0	0	0	160	220	380
4	0	0	140	80	0	0	0	0	0	0	140	80	220
5	0	0	120	140	0	0	0	0	0	0	120	140	260
6	0	0	160	40	0	0	0	0	0	0	160	40	200
7	0	0	80	40	0	0	0	0	0	0	80	40	120
8	0	0	120	140	0	0	0	0	0	0	120	140	260
9	0	0	40	100	0	0	0	0	0	0	40	100	140
10	0	0	60	80	0	0	0	0	0	0	60	80	140
11	0	0	60	20	0	0	0	0	0	0	60	20	80
12	0	0	40	60	0	0	0	0	0	0	40	60	100
13	0	0	80	20	0	0	0	0	0	0	80	20	100
14	0	0	40	0	0	0	0	0	0	0	40	0	40
15	0	0	80	60	0	0	0	0	0	0	80	60	140
16	0	0	0	0	0	0	0	0	0	40	0	40	40
17	20	0	0	0	0	0	0	20	20	0	40	20	60
18	240	80	0	0	0	20	0	40	0	20	240	160	400
19	800	20	0	0	20	60	20	0	0	40	840	120	960
20	1000	100	0	0	0	80	0	0	0	40	1000	220	1220
21	1040	20	0	0	0	60	0	60	0	100	1040	240	1280
22	920	20	0	0	20	40	0	20	0	60	940	140	1080
23	660	60	0	0	40	40	0	0	0	40	700	140	840
24	540	20	0	0	20	80	0	20	0	80	560	200	760
25	300	60	0	0	20	0	0	40	0	0	320	100	420
26	240	20	0	0	0	60	20	20	0	60	260	160	420
27	160	80	0	0	20	0	0	20	0	0	180	100	280
28	240	20	0	0	0	40	20	0	0	0	260	60	320
29	280	20	0	0	0	40	0	80	0	20	280	160	440
30	180	0	0	0	0	60	0	0	0	0	180	60	240
31	140	0	0	0	0	40	0	20	0	0	140	60	200
32	100	20	0	0	0	60	0	0	0	0	100	80	180
33	60	0	0	0	0	0	0	20	0	20	60	40	100
34	80	0	0	0	0	0	20	0	0	40	100	40	140
35	40	0	0	0	0	20	0	0	0	0	40	20	60
36	60	0	0	0	0	20	0	0	0	0	60	20	80
37	40	0	0	0	0	0	0	0	0	0	40	0	40
38	100	0	0	0	0	0	0	0	0	0	100	0	100
39	60	0	0	0	0	20	0	0	0	0	60	20	80
40	80	0	0	0	0	20	0	0	0	0	80	20	100
41	100	0	0	0	0	40	0	0	0	0	100	40	140
42	60	0	0	0	0	0	0	0	0	0	60	0	60
43	0	0	0	0	0	20	0	0	0	0	0	20	20
44	0	0	0	0	0	0	0	0	0	20	0	20	20
45	20	0	0	0	0	0	0	0	0	0	20	0	20
46	20	0	0	0	0	0	0	0	0	20	20	20	40
47	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0
50 to 59	40	0	0	0	0	0	0	0	0	0	40	0	40
60+	20	0	0	0	0	0	0	0	0	40	20	40	60
Total	7640	540	1520	1540	140	820	80	360	20	640	9400	3900	13300

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.
Note: Sampling variability is responsible for inconsistencies between tables.

TABLE 7
AGE, SEX, AND LABOR FORCE STATUS FOR NATIVE AMERICAN MILITARY PERSONNEL AND PERSONS RESIDING WITH THEM, STATE OF WASHINGTON, 1980

Age	Armed Forces		Children		Employed		Unemployed		N.I.L.F.		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
0	0	0	40	0	0	0	0	0	0	0	40	0	40
1	0	0	60	0	0	0	0	0	0	0	60	0	60
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	40	0	0	0	0	0	0	0	40	0	40
4	0	0	0	40	0	0	0	0	0	0	0	40	40
5	0	0	0	40	0	0	0	0	0	0	0	40	40
6	0	0	20	0	0	0	0	0	0	0	20	0	20
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	20	0	0	0	0	0	0	0	20	0	20
9	0	0	20	0	0	0	0	0	0	0	20	0	20
10	0	0	60	0	0	0	0	0	0	0	60	0	60
11	0	0	20	0	0	0	0	0	0	0	20	0	20
12	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	40	20	0	0	0	0	0	0	40	20	60
14	0	0	20	0	0	0	0	0	0	0	20	0	20
15	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	20	40	20	40	60
17	0	0	0	0	0	0	0	0	0	20	0	20	20
18	40	0	0	0	0	0	0	0	0	20	40	20	60
19	100	0	0	0	0	0	0	0	0	0	100	0	100
20	60	0	0	0	0	0	0	20	0	0	60	20	80
21	40	0	0	0	0	0	0	0	0	0	40	0	40
22	60	0	0	0	0	0	0	0	0	0	60	0	60
23	20	0	0	0	0	0	0	0	0	0	20	0	20
24	60	0	0	0	0	0	0	0	0	0	60	0	60
25	20	0	0	0	0	0	0	0	0	20	20	20	40
26	0	0	0	0	0	0	0	0	0	0	0	0	0
27	20	0	0	0	0	0	0	0	0	0	20	0	20
28	20	0	0	0	0	0	0	0	0	20	20	20	40
29	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	20	0	20	20
32	20	0	0	0	0	0	0	0	0	0	20	0	20
33	0	0	0	0	0	0	0	0	0	20	0	20	20
34	20	0	0	0	0	0	0	0	0	0	20	0	20
35	40	0	0	0	0	0	0	0	0	0	40	0	40
36	20	0	0	0	0	0	0	0	0	20	20	20	40
37	40	0	0	0	0	20	0	0	0	0	40	20	60
38	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0
43	20	0	0	0	0	0	0	0	0	0	20	0	20
44	0	0	0	0	0	0	0	0	0	0	0	0	0
45	20	0	0	0	0	0	0	0	0	0	20	0	20
46	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	20	0	0	0	0	0	20	20
48	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0
50 to 59	0	0	0	0	0	0	0	0	0	0	0	0	0
60+	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	620	0	340	100	0	40	0	20	20	180	980	340	1320

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.
Note: Sampling variability is responsible for inconsistencies between tables.

TABLE 8
AGE, SEX, AND LABOR FORCE STATUS FOR ASIAN MILITARY PERSONNEL AND PERSONS RESIDING WITH THEM, STATE OF WASHINGTON, 1980

Age	Armed Forces		Children		Employed		Unemployed		N.I.L.F.		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
0	0	0	60	80	0	0	0	0	0	0	60	80	140
1	0	0	140	40	0	0	0	0	0	0	140	40	180
2	0	0	140	160	0	0	0	0	0	0	140	160	300
3	0	0	160	40	0	0	0	0	0	0	160	40	200
4	0	0	120	80	0	0	0	0	0	0	120	80	200
5	0	0	60	100	0	0	0	0	0	0	60	100	160
6	0	0	60	120	0	0	0	0	0	0	60	120	180
7	0	0	80	60	0	0	0	0	0	0	80	60	140
8	0	0	120	80	0	0	0	0	0	0	120	80	200
9	0	0	80	60	0	0	0	0	0	0	80	60	140
10	0	0	40	60	0	0	0	0	0	0	40	60	100
11	0	0	60	60	0	0	0	0	0	0	60	60	120
12	0	0	20	0	0	0	0	0	0	0	20	0	20
13	0	0	20	40	0	0	0	0	0	0	20	40	60
14	0	0	20	40	0	0	0	0	0	0	20	40	60
15	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	20	0	0	20	0	20	20	40
17	0	0	0	0	20	0	0	0	60	0	80	0	80
18	60	0	0	0	0	0	0	0	0	20	60	20	80
19	120	20	0	0	0	0	0	0	20	0	140	20	160
20	120	20	0	0	0	20	0	20	20	60	140	120	260
21	120	20	0	0	0	40	0	0	0	20	120	80	200
22	60	0	0	0	0	20	0	0	0	40	60	60	120
23	60	20	0	0	0	40	0	0	0	80	60	140	200
24	100	0	0	0	0	80	0	0	0	140	100	220	320
25	80	20	0	0	20	20	0	60	0	80	100	180	280
26	80	0	0	0	0	40	0	0	0	20	80	60	140
27	60	20	0	0	20	100	0	0	0	100	80	220	300
28	20	0	0	0	0	40	0	20	20	80	40	140	180
29	100	20	0	0	0	40	0	20	0	80	100	160	260
30	80	0	0	0	20	60	0	0	0	60	100	120	220
31	20	0	0	0	0	100	0	20	0	60	20	180	200
32	20	0	0	0	0	80	0	20	0	60	20	160	180
33	80	0	0	0	0	20	0	0	0	60	80	80	160
34	60	0	0	0	0	40	0	20	0	20	60	80	140
35	40	0	0	0	0	60	0	20	0	0	40	80	120
36	80	0	0	0	0	60	0	0	0	40	80	100	180
37	20	0	0	0	20	40	0	20	0	20	40	80	120
38	20	0	0	0	0	60	0	0	0	20	20	80	100
39	80	0	0	0	0	20	0	0	0	0	80	20	100
40	100	0	0	0	0	40	0	0	0	60	100	100	200
41	20	0	0	0	0	0	0	0	0	20	20	20	40
42	0	0	0	0	0	20	0	0	0	20	0	40	40
43	20	0	0	0	0	20	0	0	0	0	20	20	40
44	0	0	0	0	0	20	0	0	0	0	0	20	20
45	20	0	0	0	0	20	0	0	0	20	20	40	60
46	0	0	0	0	0	20	0	0	0	20	0	40	40
47	20	0	0	0	20	20	0	0	0	0	40	20	60
48	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0
50 to 59	20	0	0	0	0	60	0	20	0	80	20	160	180
60+	0	0	0	0	20	0	0	0	0	120	20	120	140
Total	1680	140	1180	1020	140	1220	0	240	140	1400	3140	4020	7160

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.
Note: Sampling variability is responsible for inconsistencies between tables.

TABLE 9
AGE, SEX, AND LABOR FORCE STATUS FOR OTHER RACES MILITARY PERSONNEL AND PERSONS RESIDING WITH THEM, STATE OF WASHINGTON, 1980

Age	Armed Forces		Children		Employed		Unemployed		N.I.L.F.		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
0	0	0	80	60	0	0	0	0	0	0	80	60	140
1	0	0	20	80	0	0	0	0	0	0	20	80	100
2	0	0	60	20	0	0	0	0	0	0	60	20	80
3	0	0	20	40	0	0	0	0	0	0	20	40	60
4	0	0	20	0	0	0	0	0	0	0	20	0	20
5	0	0	40	20	0	0	0	0	0	0	40	20	60
6	0	0	40	0	0	0	0	0	0	0	40	0	40
7	0	0	0	60	0	0	0	0	0	0	0	60	60
8	0	0	40	20	0	0	0	0	0	0	40	20	60
9	0	0	20	0	0	0	0	0	0	0	20	0	20
10	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	40	20	0	0	0	0	0	0	40	20	60
12	0	0	20	0	0	0	0	0	0	0	20	0	20
13	0	0	0	20	0	0	0	0	0	0	0	20	20
14	0	0	60	0	0	0	0	0	0	0	60	0	60
15	0	0	20	60	0	0	0	0	0	0	20	60	80
16	0	0	0	0	0	0	0	0	0	20	0	20	20
17	0	0	0	0	0	0	0	0	20	0	20	0	20
18	100	0	0	0	0	0	0	0	20	0	120	0	120
19	160	20	0	0	0	0	0	20	0	20	160	60	220
20	240	0	0	0	0	0	0	0	0	0	240	0	240
21	320	60	0	0	20	0	0	20	0	0	340	80	420
22	280	20	0	0	0	40	0	0	0	0	280	60	340
23	100	20	0	0	20	0	0	0	0	40	120	60	180
24	120	0	0	0	0	20	0	20	0	40	120	80	200
25	60	0	0	0	0	40	0	0	0	20	60	60	120
26	80	0	0	0	0	20	0	20	0	0	80	40	120
27	40	20	0	0	0	0	0	0	0	0	40	20	60
28	60	0	0	0	0	0	0	0	0	40	60	40	100
29	20	0	0	0	0	20	0	0	0	0	20	20	40
30	20	0	0	0	0	20	0	0	0	20	20	40	60
31	60	0	0	0	0	0	0	0	0	0	60	0	60
32	0	0	0	0	0	20	0	0	0	20	0	40	40
33	40	0	0	0	0	0	0	0	0	0	40	0	40
34	0	0	0	0	0	20	0	0	0	0	0	20	20
35	40	0	0	0	0	0	0	0	0	0	40	0	40
36	40	0	0	0	0	0	0	0	0	0	40	0	40
37	0	0	0	0	0	20	0	20	0	0	0	40	40
38	0	0	0	0	0	0	0	0	0	0	0	0	0
39	20	0	0	0	0	0	0	0	0	0	20	0	20
40	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	20	0	0	0	0	0	20	20
42	20	0	0	0	0	0	0	0	0	0	20	0	20
43	20	0	0	0	0	0	0	0	0	0	20	0	20
44	0	0	0	0	0	20	0	0	0	0	0	20	20
45	0	0	0	0	0	0	0	0	0	20	0	20	20
46	0	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0
50 to 59	0	0	0	0	0	0	0	0	0	0	0	0	0
60+	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1840	140	480	400	40	260	0	100	40	240	2400	1140	3540

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.
Note: Sampling variability is responsible for inconsistencies between tables.

TABLE 10

HOUSING THE MILITARY PERSONNEL, LIVING QUARTERS BY RELATIONSHIP TO HOUSEHOLDER
STATE OF WASHINGTON, 1980

	Group Quarters		Owner		Cash Rent		No Cash Rent		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
Householder	0	0	7840	100	15280	700	1740	0	24860	800	25660
Spouse	0	0	400	340	540	620	60	60	1000	1020	2020
Child	0	0	380	60	100	40	0	0	480	100	580
Sibling	0	0	20	0	40	0	0	0	60	0	60
Parent	0	0	20	0	0	0	0	0	20	0	20
Other Relative	0	0	100	0	60	20	20	0	180	20	200
Boarder	0	0	100	60	220	20	20	0	340	80	420
Roommate	0	0	60	0	1300	180	20	0	1380	180	1560
Nonrelative	0	0	80	20	240	0	20	0	340	20	360
Nonimate	21040	1220	0	0	0	0	0	0	21040	1220	22260
Total	21040	1220	9000	580	17780	1580	1880	60	49700	3440	53140

Source: Census of Population and Housing, 1980: Public-use Microdata Sample A. Bureau of the Census, 1983.

Note: Group quarters reflects persons living in barracks, on ships, and other military group quarter facilities. Owner occupied and rental housing requiring cash rent is assumed to represent off-base housing. No cash rent housing is assumed to reflect on-base housing or off-base housing under military jurisdiction.

TABLE 11
HOUSING THE MILITARY PERSONNEL, HOUSING UNITS IN STRUCTURE
BY PERSONS PER OCCUPIED HOUSEHOLD, STATE OF WASHINGTON, 1980

	Units in Structure						
	1	2	3 & 4	5+	M.H.	Other	Total
Persons in Owner Occupied							
1	360	20	0	20	40	0	440
2	1800	20	40	20	80	0	1960
3	1940	20	20	60	80	0	2120
4	2740	0	20	20	160	0	2940
5	1240	0	20	0	100	0	1360
6	540	0	0	0	40	0	580
7	140	0	0	0	20	0	160
8	20	0	0	0	0	0	20
9	0	0	0	0	0	0	0
	8780	60	100	120	520	0	9580
Persons in Renter(cash)							
1	300	140	180	1040	60	0	1720
2	1740	480	620	2800	120	0	5760
3	1680	680	460	1900	340	0	5060
4	2000	700	340	1020	120	20	4200
5	920	340	120	360	20	0	1760
6	300	80	80	40	0	0	500
7	100	20	20	100	0	0	240
8	80	0	0	0	0	0	80
9	20	0	0	20	0	0	40
	7140	2440	1820	7280	660	20	19360
Persons in Renter(non cash)							
1	0	0	0	20	0	0	20
2	100	80	40	100	0	0	320
3	180	80	40	280	0	0	580
4	320	140	20	120	0	0	600
5	120	20	20	0	0	0	160
6	140	20	20	0	0	0	180
7	0	0	20	0	0	0	20
8	40	0	20	0	0	0	60
9	0	0	0	0	0	0	0
	900	340	180	520	0	0	1940
Total							
1	660	160	180	1080	100	0	2180
2	3640	580	700	2920	200	0	8040
3	3800	780	520	2240	420	0	7760
4	5060	840	380	1160	280	20	7740
5	2280	360	160	360	120	0	3280
6	980	100	100	40	40	0	1260
7	240	20	40	100	20	0	420
8	140	0	20	0	0	0	160
9	20	0	0	20	0	0	40
	16820	2840	2100	7920	1180	20	30880

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.

TABLE 12
PERSONS LIVING IN MILITARY HOUSEHOLDS WHO ARE CURRENTLY ENROLLED AND ATTENDING SCHOOL, WASHINGTON STATE, 1980

Age	Grade Currently Attending															
	Nursery	K	1	2	3	4	5	6	7	8	9	10	11	12	C1-C4	C5+	Total
0	40																40
1																	0
2	200																200
3	720																720
4	760	20															780
5	380	1280	20														1680
6	20	1040	720	80													1860
7		40	960	600	60	20											1680
8			180	980	840	20											2020
9			40	60	780	860											1740
10					160	920	680	20									1780
11						60	760	720	20								1560
12						20	80	700	500	20							1320
13								80	500	660	40						1280
14									50	620	560						1260
15										80	540	340					960
16				20							80	640	400	20			1160
17												20	420	460			900
18										20			80	320	180		600
19												20	60	20	200		300
20														20	220		240
21															220		220
22									20						80		100
23									20					20	180	40	260
24															120	20	140
25-34									20	20		20			720	120	900
35+															280	60	340
Total	2120	2380	1920	1740	1840	1900	1520	1520	1160	1420	1220	1040	960	860	2200	240	24040

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.

Note: Tabulation reflects persons enrolled and attending a public, private or church-related regular graded school between February 1, 1980 and April 1, 1980. Census data exclude many enrolled persons from their tabulations. Only those enrolled in regular schools are counted. Schools regarded as not regular include nursery schools which simply provide custodial day care; specialized vocational, trade, or business schools outside the regular system, such as television repair schools, barber's colleges, or typist's training schools; on-the-job training; and correspondence courses.

TABLE 13
COMPLETED EDUCATION FOR MILITARY MEN AND WOMEN, BY AGE
STATE OF WASHINGTON, 1980

Age	Level of Schooling K-6	7 & 8	9-11	12	C1-C3	C4	C5+	Total
16 & 17	0	60	280	40	0	0	0	380
18	0	40	840	1100	60	0	0	2040
19	0	100	1060	2540	160	0	0	3860
20	0	0	1200	3820	240	0	0	5260
21	0	0	780	3740	600	0	0	5120
22	40	0	500	3600	840	100	0	5080
23	0	20	320	2200	720	260	20	3540
24	0	0	340	1980	580	320	40	3260
25	20	0	180	1400	720	260	60	2640
26	0	0	80	1220	460	320	140	2220
27	20	0	60	900	560	220	100	1860
28	0	0	100	680	360	200	140	1480
29	0	40	40	820	360	120	100	1480
30	0	0	20	860	400	100	120	1500
31	20	0	40	600	420	200	260	1540
32	0	20	80	420	580	120	220	1440
33	0	0	140	580	440	80	140	1380
34	0	20	60	420	200	60	120	880
35	0	0	80	380	340	120	180	1100
36	0	20	0	620	240	140	180	1200
37	0	20	0	540	400	100	80	1140
38	20	0	0	440	220	20	100	800
39	0	0	20	180	260	60	160	680
40 to 49	0	0	160	1100	520	520	540	2840
50+	0	40	80	260	100	60	120	660
Total	120	380	6460	30440	9780	3380	2820	53380

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.

Note: Tabulations reflect persons not enrolled or attending a private, public or church-related regular school between February 1, 1980 and April 1, 1980. Persons not enrolled in school are assumed to have completed their education.

TABLE 14
COMPLETED EDUCATION FOR PERSONS LIVING WITH MILITARY PERSONNEL
WHO ARE NOT ENROLLED OR ATTENDING SCHOOL
STATE OF WASHINGTON, 1980

Age	Level of Schooling K-6	7 & 8	9-11	12	C1-C3	C4	C5+	Total
<16	460	0	20	0	0	0	0	480
16 & 17	0	0	260	60	0	0	0	320
18	0	0	200	360	0	0	0	560
19	0	20	340	480	40	0	0	880
20	0	0	280	720	240	0	0	1240
21	20	20	160	920	340	20	0	1480
22	0	20	180	680	200	60	0	1140
23	0	40	200	600	420	120	0	1380
24	20	0	200	580	260	120	20	1200
25	0	20	140	660	360	0	20	1200
26	0	0	120	480	340	240	40	1220
27	20	20	100	480	360	100	60	1140
28	60	20	60	320	340	80	60	940
29	0	40	120	460	240	140	40	1040
30	20	0	40	460	120	220	20	880
31	0	20	100	480	400	140	40	1180
32	40	20	60	540	260	80	60	1060
33	20	20	100	420	80	60	40	740
34	0	20	60	280	160	140	20	680
35	20	20	80	280	100	100	80	680
36	0	0	100	360	220	60	40	780
37	0	40	60	240	80	80	20	520
38	0	40	60	240	40	100	0	480
39	0	20	20	60	60	20	20	200
40 to 49	60	160	160	1260	580	220	80	2520
50+	120	260	200	800	100	80	100	1660
Total	860	820	3420	12220	5340	2180	760	25600

Source: Census of Population and Housing, 1980: Public-Use Microdata Sample A. Bureau of the Census, 1983.

Note: Tabulations reflect persons not enrolled or attending a private, public or church-related regular school between February 1, 1980 and April 1, 1980. Persons not enrolled in school are assumed to have completed their education.

A SPECIAL CONSIDERATION IN IMPROVING HOUSING UNIT ESTIMATES: THE INTERACTION EFFECT

by Theresa J. Lowe, William R. Myers, Lawrence M. Weisser

INTRODUCTION

The basic integrity, value and potential accuracy of the housing unit method has generally been established in more recent evaluations. (Smith and Lewis, 1980, 1983). The focus of most current studies is on alternative techniques and data sources that can be used to develop more refined estimates. This paper provides further evidence supporting the accuracy of the housing unit method for local population estimates. More important, it identifies the need to examine not only specific sources of error in developing housing unit estimates, but also the interaction of bias in individual estimated data elements used in operationalizing the method.

The first section contains a brief description of Washington's housing unit method, the specific data sources and techniques used to prepare 1980 population estimates for 211 Washington cities. In the following section, population estimates, and estimates of the individual method components (i.e., housing units, occupancy rates, persons per household and group quarters), are compared to 1980 census data. The third section explores possible ways of improving Washington's housing unit estimates. Results indicate that the interaction of bias in the individual data elements in the method is an important consideration when refining the method.[1] More accurate estimates of housing stock, occupancy rates or other elements in the method may or may not improve the precision of the population estimates.

I. WASHINGTON'S HOUSING UNIT METHOD

Washington state has used the housing unit method to develop annual population estimates for cities and towns since World War II. The basic housing unit formula is $P_t = (H_t \cdot O_t) \cdot PPH_t + GQ_t$, where

P_t is the total population at time t,
H_t is the total housing units at time t,
O_t is the proportion of occupied units at time t,
PPH_t is the average number of Persons Per Household at time t, and
GQ_t is group quarters at time t.

As concisely stated by Smith and Lewis, the housing unit formula "... is a identity not an estimate" (1980, p. 323). Successful application of the method depends on how the components are operationalized. Specific data and techniques used in Washington have been previously documented and will only be briefly reviewed here (Lowe, Pittenger and Walker, 1977).

Housing stock for each city is updated from the most recent census to the estimate date by annual city reports on residential construction (housing permits), conversions, annexations[2], and demolitions. Housing stock is updated, by structure type, with most cities under 50,000 in population providing actual counts for the mobile home/trailer category.

Occupancy data from the most recent city census are used for the current estimate, or are obtained by field survey. Field surveys are conducted whenever a city's last census (or last field survey) is a few years old, or whenever there have been changes in the local economy.

The technique used to develop estimates of PPH depends on the type of data available for each city. The most frequent method is an extrapolation of the PPH trend between the two most recent censuses. Trends in PPH identified in cities that census are applied to non-censusing cities of a similar type. PPH trends for Washington's largest cities (50,000 population or more) are developed from Bureau of the Census national survey data, or special purpose surveys (e.g., Portland Household Size Survey).[3]

Separate estimates of household population are prepared by structure type categories (i.e., single family, multiunit, mobile homes/trailers,) and summed to an estimate of total household population. Group quarter counts, by type, are submitted by the cities. Independent collection of these data for large military, institutional, or other facilities provide a check on the city counts.

It should be noted that the state's annual estimate program is supported by an active special census program. Between 1970 and 1980, all but 53 of the 265 cities and towns in Washington conducted a special census at least once. Many cities and towns conducted a census several times during the decade. April 1, 1980, population estimates for 211 Washington cities are used in the present study. These estimates were prepared and published by June 30, 1980, prior to the release of 1980 federal census field counts. Fifty-four cities that conducted a special census in 1980 are not included in the analysis.

II. EVALUATION OF ERROR AND BIAS

Table 1 shows a summary comparison of Washington's city and town population estimates, and estimates of the four data elements used in the formula, with 1980 federal census data.[4] Average absolute percent error is used as a measure of accuracy and two measures of bias are provided. More detailed information is shown in Appendix Tables 1-5.

A. Error and Bias in the Population Estimate

TABLE 1. - Summary of Error in 1980 Population Estimates and Estimated Components of the Housing Unit Method State of Washington

City Size by 1970 Population	Number Cities	Average Absolute Percent Error[1]				
		Total Population	Housing Units	Occupancy Rates	Persons in Household	Group Quarters
100,000 or more	3	0.81	1.10	3.44	2.54	7.63
50,000-99,999	2	4.84	1.81	3.90	1.25	3.92
25,000-49,999	7	2.66	4.11	3.96	3.31	31.52
10,000-24,999	22	4.00	3.40	3.95	4.70	14.26
5,000-9,999	16	4.27	5.38	2.65	4.18	347.79
2,500-4,999	32	3.93	3.45	3.23	3.42	18.36
1,000-2,499	48	6.19	5.56	5.78	3.48	20.67
500-999	31	7.24	6.13	4.57	4.34	19.73
250-499	36	8.90	5.39	9.58	5.47	3.74
50-249	14	7.35	4.83	9.45	8.24	7.14
Less Than 50	0	—	—	—	—	—
Total	211	5.96	4.86	5.57	4.39	40.55
Number of Negative Difference		88	150	21	105	32
Average Algebraic Percent Error[2]		2.32	-2.81	4.97	0.16	31.21

[1]Average percent difference calculated as the arithmetic mean of the percent differences disregarding the sign.
[2]Average percent difference calculated as the arthmetic mean of the percent differences including the sign.

The overall mean absolute error of 5.96 percent in the population estimates supports the accuracy of the housing unit method for producing city and town estimates. This error is low when compared to other applications of the method (Zitter and Shryock, 1964; Starsinic and Zitter, 1968; Smith and Lewis, 1980, 1983), and remarkably low considering that 61 percent of the cities in Washington are less than 2,500 in population.

The error in Washington's city and town population estimates is also low when compared to estimates developed by the Census Bureau's Administrative Record method. A comparison of 1975 postcensal population estimates with special censuses in 799 cities nationwide showed the Administrative Record estimates to have an absolute mean error of 11.70 percent, with 50 percent of the cities estimated being less than 2,500 in population (National Research Council, 1980). In a more recent evaluation against 1980 census data, the Bureau's Administrative Record estimates for 35,693 cities, towns and townships had an average absolute mean error of 15.53 percent (76 percent of these areas were less 2,500 in size).[5]

Consistent with other studies, the accuracy of Washington's population estimates declines with city size. Not only are smaller areas more variable, but small numbers tend to magnify percent errors. The population estimates also have a slight upward bias with 123 (58.3 percent) of the cities being overestimated.

There is no doubt that Washington's active special census program contributes to the accuracy of the population estimates. Estimates for the state's three largest cities, however, are notably good and none of these cities conducted a census between 1970 and 1980. Special censuses not only update the housing stock, occupancy rates and PPH, but they reduce time interval between censuses when trending PPH. The practical features of the housing unit method, in this respect, have been noted by Swanson, Baker and Van Patten (1983).

It is also true that the city and town estimate program in Washington requires considerable financial resources in terms of staff time and survey costs. Careful collection of local data and attention to detail at every stage of the

estimation process is tedious and time comsuming. The basic housing unit data, PPH trends from special censuses, and other supplemental information are kept on computer files, but each city estimate is developed on an individual basis. It has always been felt that automating the entire estimation process would reduce the quality of the estimates. This is supported by a recent reassessment of the housing unit method by Meyer Zitter, for the Bureau of the Census (1984). Zitter found that the method did not work well in a mass operation-type estimation program. Even the accuracy of local estimates prepared by state agencies appeared to be directly related to the quality of the data used and the amount of staff resources allocated to the program.

B. Error and Bias in the Estimated Formula Components

Which estimated component is best? The PPH estimates clearly proved to be the most accurate and least biased. The mean absolute percent error for all city size categories combined is 4.39 percent compared to 4.86 percent for housing unit estimates, and 5.57 percent for occupancy rates. The mean algebraic percent difference is 0.16 percent. There is generally a 50/50 split in over-and underestimates by city size (Appendix Table 4).

The housing unit estimates show a strong negative bias with 150 (71.1 percent) of city housing stock being underestimated. The occupancy rate estimates on the other hand, have a very strong positive bias, with 190 (90.0 percent) of the city rates being overestimated.

In Table 2, a hypothetical housing unit model (the Single Estimator Error Model) is used to show the error each data component contributes to the population estimate. Housing unit, occupancy rate, and PPH error translate directly into the population estimate. The group quarter estimates, which have a large mean absolute error (40.5 percent),[6] as an additive component, contribute very little error to the population estimate (0.54 percent).

TABLE 2. - Summary of Error in 1980 Population Estimates Produced by Each Estimated Component, State of Washington

(SINGLE ESTIMATOR ERROR MODEL)

Housing Unit Method Data Input				Error in Population Estimate	
Housing Units (H_t)	Occupancy Proportion (O_t)	Persons Per Household (PPH_t)	Group Quarters (GQ_t)	No. of Negative Diff.[1]	Average Absolute[2] % Difference
1980 Census	1980 Census	1980 Census	1980 Census	0	0.000
1980 State Est.	1980 Census	1980 Census	1980 Census	150	4.744
1980 Census	1980 State Est.	1980 Census	1980 Census	21	5.487
1980 Census	1980 Census	1980 State Est.	1980 Census	105	4.295
1980 Census	1980 Census	1980 Census	1980 State Est.	32	0.539

N=211

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.

The magnitude of the error and bias in occupancy rate estimates, compared to the other data components, is noteworthy. In prior evaluations of the housing unit method, very little direct attention has focused on occupancy rates.[7] It is household estimates, which reflect the combined effect of housing unit and occupancy rate estimates, that have been evaluated. Smith and Lewis (1983), for example, speculate that their PPH estimates are most accurate because PPH in Florida changed less over the prior decade than households. Thus, there is less potential for error in PPH estimates. While this idea may have merit, it does not explain the current results. In Washington, over the 1970-80 decade, occupancy rates for incorporated

places (combined), only changed 0.7 percent, compared to 24.3 percent for housing units and -13.3 percent for PPH. Yet, the occupancy rate estimates have the largest error. This leads to several questions. Given the stability of occupancy rates over time, would the 1970 federal census rates have been a better estimate of 1980 rates? Would they have improved the state's population estimates? Are the state field surveys actually contributing to error in the population estimates?

As a preliminary test, 1970 occupancy rates were entered in the Single Estimator Model (Table 3). The average absolute error in the population estimate for all city categories combined was only 3.46 percent, compared to 5.57 percent for the state occupancy estimates. The 1970 occupancy rates as 1980 estimates, also showed considerably less bias, with only 123 (58.3 percent) of the rates for cities being overestimated. While these initial results appeared encouraging, actually combining 1970 federal census occupancy rates with our 1980 estimates of housing units, PPH and group quarters did not improve the population estimates. This will be discussed in the next section.

Table 3. - Error in the 1980 Population Estimates Produced by Using 1970 Federal Census Occupancy Rates

(SINGLE ESTIMATOR ERROR MODEL)

City Size by 1970 Population	Number of Cities	Number of Negative Differences [1]	Average Absolute Percent [2] Error	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	2	1.558	1	2				
50,000-99,999	2	2	1.827		2				
25,000-49,999	7	2	1.986	1	5	1			
10,000-24,999	22	9	2.717	7	8	4	2	1	
5,000-9,999	16	9	1.774	7	8		1		
2,500-4,499	32	18	2.042	14	12	3	2	1	
1,000-2,499	48	17	3.164	10	19	12	5	1	1
500-999	31	12	3.569	8	9	5	8	1	
250-499	36	11	6.332	7	8	7	7	2	5
50-249	14	6	4.622	3	3	5	1	1	1
Less Than 50									
Total	211	88	3.464	58	76	37	26	7	7
Average Algebraic Percent Difference [3]	1.159								

[1] The number of areas with estimates that fall below the 1980 federal census
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.
[3] Average algebraic percent difference is calcualted as the arithmetic mean of the percent differences including the sign.

III. IMPROVING WASHINGTON'S HOUSING UNIT ESTIMATES: THE INTERACTION EFFECT

The ultimate goal of testing population estimation methods is to improve their utility. The utility of any given technique depends upon the accuracy of the method and the costs incurred by using it. Accurate, but labor intensive costly techniques are simply not practical for agencies that must develop statewide municipal estimates. Even testing various refinements to methods can often involve some discretion in terms of cost.

Washington's initial testing program had two primary concerns. The first was to examine the accuracy of the municipal estimates and determine the major sources of error. The second was to identify practical ways to improve the population estimates, and if possible, reduce the costs of the estimation program. Annual occupancy surveys were one of the primary cost concerns.[8]

A. Possible Improvements

It would be easy to assume that improved estimates of any given component in the housing unit formula would improve the population estimates. Estimates of city housing stock, which were generally low, would probably be the easiest and least costly component to correct. Annual city reporting forms could be designed to improve the reporting of converted units and mobile home/trailer counts. In addition, when cities conduct a special census, there is a tendency to only report building permits issued after the special census date. Units under construction during the census that have not met the criteria to be counted as a vacant unit often drop out of the housing stock. Better efforts could be made to handle this problem, in the special census manuals and in the field.

The error or bias in the other housing unit method components would be more difficult to correct. The cost of annual field surveys is already becoming prohibitive. Even though a current re-evaluation of postal vacancy survey data looks promising, these data are not available for smaller localities.[9]

Several alternative techniques for trending PPH estimates, using special census data and/or national survey data, might be examined.

B. Test of Possible Improvements

Which improvements would yield the best results? Tests using a second set of hypothetical housing unit estimates, summarized in Table 4, prove very interesting. In this series, called the "Zero Estimator Error Model," 1980 census data are used as a "perfect" estimate of each component and separately combined with state estimates of the remaining components.

Results indicate that more precise and unbiased estimates of any given data element do not necessarily improve the population estimates. A "perfect" estimate of housing stock, for example, increases the over all absolute mean error in the city population estimates to 6.57 percent, compared to 5.96 percent in the original 1980 estimates. In the actual estimates, the negative bias in the state's housing unit estimates is offset by the strong positive bias in the occupancy rate estimates. This interaction improves the accuracy of the population estimates.

"Perfect" occupancy rate estimates only slightly improve the mean absolute error in original population estimates, from 5.96 percent to 5.62 percent. Most of the improvement in the estimates is concentrated in the smaller cities, those 250-2,500 in population (Appendix Table 7). It is the improved PPH estimates, that show the best results. Overall absolute mean error in the city population estimates drops to 5.30 percent. Thirty-six cities have errors of less than one percent compared to 24 in the actual estimates (Appendix Table 8). Cities with errors in the extreme categories (10 percent or more) are reduced from 40 to 26. These results are not surprising. The state's PPH estimates were the only component in the housing unit formula that had no bias. Improvement in this component yields more predictable results.

TABLE 4. - Summary of Error in 1980 Population Estimates Produced by Zero Error Estimates of Each Component, State of Washington

(ZERO ERROR ESTIMATOR MODEL)

Housing Unit Method Data Input				Error in Population Estimate		
Housing Units H_t	Occupancy Proportion O_t	Persons Per Household PPH_t	Group Quarters GQ_t	No. of Negative Diff.[1]	Average Algebraic % Diff.[2]	Average Average % Diff.[3]
1980 Census	1980 State Est.	1980 State Est.	State Est.	43	5.31	6.57
1980 State Est.	1980 Census	1980 State Est.	1980 State Est.	141	-2.31	5.62
1980 State Est.	1980 State Est.	1980 Census	1980 State Est.	80	2.34	5.30
1980 State Est.	1980 State Est.	1980 State Est.	1980 Census	91	1.98	6.22

N=211

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average algebraic percent difference is calculated as the arithmetic mean of the percent differences including the sign.
[3] Average percent difference calculated as the arithmetic mean of the percent differences disregarding the sign.

A final test was run to evaluate what would have occurred if 1970 federal occupancy rates for cities had been used to develop 1980 population estimates. Evaluated against 1980 occupancy rates, the 1970 rates had less error and less bias than did the State field survey estimates. The results were disappointing (Table 5). Error in the city population estimates did not improve. The accuracy of the estimates for the state's three largest cities (over 100,000 in population), noticeably deteriorated. Average absolute mean error for this city size category increased from .81 percent to 3.85 percent when 1970 occupancy rates were used.

TABLE 5. - Error in 1980 Population Estimates Produced by
Using State Estimates of Housing Units, PPH and Group Quarters
With 1970 Federal Census Occupancy Rates
State of Washington

City Size by 1970 Population	Number of Cities	Number of Negative Differences [1]	Average Absolute Percent Error [2]	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	3	3.845		1	1	1		
50,000-99,999	2	1	2.533		1	1			
25,000-49,999	7	4	3.632	1	1	3	2		
10,000-24,999	22	15	6.156	2	4	3	9	4	
5,000-9,999	16	11	5.232	4	2	4	4	1	1
2,500-4,999	32	23	5.022	2	8	10	9	2	1
1,000-2,499	48	28	5.815	3	9	9	21	6	
500-999	31	18	7.054	6	4	2	10	7	2
250-499	36	14	7.682	2	7	5	9	9	4
50-249	14	7	7.524	3	3		3	3	2
Less Than 50	0								
Total	211	124	6.169	23	40	38	68	32	10
Average Algebraic Percent Difference [3]	-1.255								

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.
[3] Average algebraic percent difference is calculated as the arithmetic mean of the percent differences including the sign.

It is clear that the interaction of biased components in the original estimates contributed to the overall accuracy of Washington's housing unit method. The introduction of more precise and unbiased estimates of any single component will not necessarily improve the population estimates. Our results, of course, emphasize the importance of using unbiased data component estimates in the housing unit method. Such estimates give much more predictable results in refining the method. The results also identify the need to consider the possible interaction of biased components when selecting new data sets, and/or techniques to improve the method.

C. Washington's Population Estimates--Right for all the Wrong Reasons?

One final consideration deserves attention. Are Washington's city and town estimates right — but for the wrong reasons? No. We believe that Washington's housing unit and occupancy rate estimates reflect the characteristics of our special censuses. Namely, lower housing unit counts and higher occupancy rates than are found in decennial federal census counts. These differences occur because special city census staff are reluctant to count marginally inhabitable housing units and incomplete new constructions.[10] This reduces the city housing unit counts in the special census data. It also increases the occupancy rate for the city housing units because the marginally inhabitable units and incomplete new constructions are all vacant. Local knowledge and access to city utility accounts also enable city enumerators to verify questionably vacant units as being occupied. Federal census staff do not have access to city records.

From 1971 through 1979, there were 658 special city censuses in Washington. Seventy-five percent of the cities included in the analysis conducted one or more special censuses during the 1970 decade. The special census housing counts were used as a base in developing housing unit estimates for 1980. In most cases, occupancy rates at the time of the last special census were used as 1980 occupancy rate estimates.

Given the housing unit and occupancy rate differences between special city census counts and federal census counts, the 1980 federal data do not provide

a good basis for examining the error in Washington's housing unit data elements. Much of what appears to be a low bias in our city housing stock estimates and a high bias in our occupancy rate estimates is really due to the differences in special census and federal census counts.

Does this consideration detract from our findings? No. Most data sources, or estimation techniques, per se, contain some bias. This is true at the local, state, and national level. We believe that the interaction of biased data is an important practical consideration when attempting to refine the housing unit or other estimation methods.

IV. SUMMARY AND CONCLUSIONS

The housing unit method is the most commonly used method for developing local population estimates. It is important that efforts to improve the utility of this method continue, and that sound judgments be made as to how the technique can be improved in specific, as well as more general applications.

Most prior examinations of the method have focused on the precision and bias of the population estimates and the individual estimated formula components. Few, if any, examinations have directed attention to the interaction of bias in the estimated components in relation to the final population estimate. Based on the current evaluation of Washington's housing unit estimates, we emphasize the need to account for the interaction of bias among the estimated formula components when planning refinements to the method. Further analysis of error in the method, using statistical decomposition (Kitagawa, 1955; Chow, 1973), might prove to be of particular value. There is no doubt that continuing research will lead to increasingly successful applications of the housing unit method.

FOOTNOTES

[1] The term interaction simply refers to how the direction of error in separate data elements, when used in the housing unit formula, combine to decrease or magnify the error in the population estimate.

[2] Every municipal annexation in Washington, by statute, requires a census of population and housing.

[3] The Portland Household Size Survey was conducted by the Center for Population Research and Census, Portland State University, in 1974, 1976 and 1978. These data were invaluable in developing PPH trends for Washington's largest cities and show the cooperation between state agencies responsible for population estimates.

[4] In the present evaluation, differences between the estimate data and the 1980 federal census data are considered to be error in the estimate data. The difference between the estimate and the census data can actually be due to errors in the estimates or errors in the census data. Errors in the census benchmark data can also be a source of error in the estimates. Several cities and towns in Washington are known to have been incorrectly enumerated or tabulated in 1970 or 1980. Several cities conducted special state censuses to correct federal enumerations. Fewer problems occurred in 1980.

[5] Unpublished results of the Federal Bureau of the Census test of the administrative record estimates against 1980 census data. Obtained by phone from Dave Galdi, March 2, 1984.

[6] Because of the small numbers involved, group quarters is a troublesome component, at best, to evaluate in terms of percent error.

[7] In their recent evaluation of several housing unit methods, Smith and Lewis (1980, 1983) focus their attention on household estimates. While some of the household estimates were developed from permit data and occupancy rates, they were not treated separately. Smith and Lewis use a censal ratio technique to estimate households directly from active electric customer data. This is attractive in that it eliminates problems in dealing with permit data and occupancy rates. The accuracy of this technique, however, remains to be established for small areas and in places outside of Florida where utility data may not be of equal quality.

[8] While surveys are costly in terms of staff time and travel, their value cannot be measured strictly in terms of the accuracy they may lend to the final population estimate. From the perspective of the local officials, field work enhances the credibility of the state's estimates; this reduces disagreement and official challenges to the state's population determinations.

[9] In our current evaluation of postal vacancy survey data a censal ratio technique is used to adjust for difference in city boundaries and housing unit definitions. More important, new constructions are included in developing the occupancy rates. Final results should be available in the fall, 1984.

[10] One finance director of a moderate sized city (23,000) that conducted five special censuses between 1970 and 1980, refused to allow new constructions, at any stage, to be counted. These units were later added to the city's housing stock as certificates of occupancy/completion were received. While this is an extreme example, it typifies the local attitude. The primary goal of a state special census is an accurate determination of population for revenue allocation purposes. In selective circumstances, strict adherence to federal census definitions assumes lower priority.

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APPENDIX TABLE 1. - Error in 1980 Population Estimates, State of Washington

City Size by 1970 Population	Number of Cities	Number of Negative Differences[1]	Average Absolute Percent[2] Error	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	1	.814	3					
50,000-99,999	2	0	4.842		1		1		
25,000-49,999	7	2	2.657	2	3	1	1		
10,000-24,999	22	11	4.002	2	7	5	7	1	
5,000-9,999	16	8	4.270	3	5	2	5	1	
2,500-4,999	32	17	3.930	6	7	7	12		
1,000-2,499	48	22	6.186	5	11	6	16	7	3
500-999	31	13	7.242	1	8	6	7	5	4
250-499	36	8	8.897	1	9	4	7	8	7
50-249	14	6	7.346	1	3	2	4	2	2
Less Than 50	0								
Total	211	88	5.959	24	54	33	60	24	16

[1]The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.

APPENDIX TABLE 2. - Error in 1980 Housing Unit Estimates, State of Washington

City Size by 1970 Population	Number of Cities	Number of Negative Differences[1]	Average Absolute Percent[2] Error	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	1	1.096	1	2				
50,000-99,999	2	1	1.805		2				
25,000-49,999	7	5	4.109		3	2	1	1	
10,000-24,999	22	16	3.40	5	7	3	7		
5,000-9,999	16	15	5.378	3	3	5	3	1	1
2,500-4,999	32	27	3.448	5	11	9	6	1	
1,000-2,499	48	34	5.561	4	10	13	13	7	1
500-999	31	19	6.134	5	6	7	6	3	4
250-499	36	24	5.389	4	9	11	8	2	2
50-249	14	8	4.829	1	2	5	5	1	
Less Than 50	0								
Total	211	150	4.860	28	55	55	49	16	8

[1]The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.

APPENDIX TABLE 3. - Error in 1980 Occupancy Rate Estimates, State of Washington

City Size by 1970 Population	Number of Cities	Number of Negative Differences [1]	Average Absolute Percent [2] Error	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	0	3.436		1	2			
50,000-99,999	2	0	3.899			2			
25,000-49,999	7	0	3.964		1	6			
10,000-24,999	22	0	3.950	1	9	4	8		
5,000-9,999	16	1	2.648		9	6	1		
2,500-4,999	32	3	3.233	4	13	10	4	1	
1,000-2,499	48	2	5.783	3	7	14	19	3	2
500-999	31	4	4.572	6	8	4	11	2	
250-499	36	6	9.580	2	5	6	12	5	6
50-249	14	5	9.449		4		4	4	2
Less Than 50	0								
Total	211	21	5.569	16	57	54	59	15	10

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.

APPENDIX TABLE 4. - Error in 1980 Population Per Household Estimates, State of Washington

City Size by 1970 Population	Number of Cities	Number of Negative Differences [1]	Average Absolute Percent [2] Error	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	3	2.539		3				
50,000-99,999	2	1	1.251	1	1				
25,000-49,999	7	4	3.306		3	3	1		
10,000-24,999	22	12	4.709	3	5	4	9	1	
5,000-9,999	16	7	4.182	3	4	3	6		
2,500-4,999	32	18	3.420	6	13	6	6		1
1,000-2,499	48	25	3.479	11	15	10	10	2	
500-999	31	20	4.339	5	5	7	13	1	
250-499	36	9	5.467	3	8	11	10	2	2
50-249	14	6	8.238		1	3	6	2	2
Less Than 50	0								
Total	211	105	4.391	32	58	47	61	8	5

[1] The number of areas with estimates that fall below the 1980 federal census
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.

APPENDIX TABLE 5. - Error in 1980 Group Quarter Estimates, State of Washington

City Size by 1970 Population	Number of Cities	Number of Negative Differences [1]	Average Absolute Percent [2] Error	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	1	7.632			1	1	1	
50,000-99,999	2	2	3.921		1		1		
25,000-49,999	7	0	31.523		1		1		5
10,000-24,999	22	10	14.264	1	4	5	1	3	8
5,000-9,999	16	3	347.790	3	3		3	2	5
2,500-4,999	32	7	18.356	8	7	1	3	3	10
1,000-2,499	48	5	20.667	23	5	3	6	2	9
500-999	31	2	19.726	23	1				7
250-499	36	1	3.742	34					2
50-249	14	1	7.143	13					1
Less Than 50	0								
Total	211	32	40.547	105	22	10	16	11	47

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.

APPENDIX TABLE 6. - Error in 1980 Population Estimates Produced by Zero Error Estimates of Housing Units State of Washington

(ZERO ERROR ESTIMATOR MODEL)

City Size by 1970 Population	Number of Cities	Number of Negative Difference [1]	Average Absolute Percent Error [2]	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	1	.813	2	1				
50,000-99,999	2	0	4.239			1	1		
25,000-49,999	7	1	5.175		3		4		
10,000-24,999	22	5	4.435	4	5	5	7		1
5,000-9,999	16	4	6.545	1	4	5	2	3	1
2,500-4,999	32	6	4.211	8	9	5	7	2	1
1,000-2,499	48	10	6.444	5	13	9	10	6	5
500-999	31	10	5.648	2	7	7	11	2	2
250-499	36	1	11.482	3	6	1	8	6	12
50-249	14	5	7.381	1	3	3	3	2	2
Less Than 50	0								
Total	211	43	6.565	26	51	36	53	21	24

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent difference calculated as the arithmetic mean of the percent differences disregarding the sign.

APPENDIX TABLE 7. - Error in 1980 Population Estimates Produced by Zero Error Estimates of Occupancy Rates Compared to Federal Census Data
State of Washington

(ZERO ERROR ESTIMATOR MODEL)

City Size by 1970 Population	Number of Cities	Number of Negative Differences[1]	Average Absolute Percent Error[2]	Percent differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	3	2.860		2	1			
50,000-99,999	2	1	3.033		1	1			
25,000-49,999	7	6	3.484		3	3	1		
10,000-24,999	22	16	5.482	3	3	4	9	3	
5,000-9,999	16	11	4.274	4	2	6	3		1
2,500-4,999	32	23	4.204	3	10	10	7	2	
1,000-2,499	48	32	5.726	11	4	6	20	6	1
500-999	31	20	6.736	1	7	6	11	4	2
250-499	36	21	6.372	3	7	9	10	4	3
50-249	14	8	7.933	2	3		3	4	2
Less Than 50	0								
Total	211	141	5.624	27	42	46	64	23	9

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent differences calcualted as the arithmetic mean of the percent differences disregarding the sign.

APPENDIX TABLE 8. - Error in 1980 Population Estimates Produced by Zero Error Estimates of Population Per Household Compared to Federal Census Data
State of Washington

(ZERO ERROR ESTIMATOR MODEL)

City Size by 1970 Population	Number of Cities	Number of Negative Differences[1]	Average Absolute Percent Error[2]	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	0	2.903		2	1			
50,000-99,999	2	0	4.375		1		1		
25,000-49,999	7	1	2.815	3	1	2	1		
10,000-24,999	22	7	3.234	2	9	8	3		
5,000-9,999	16	8	2.149	4	7	3	2		
2,500-4,999	32	15	2.972	5	17	6	3	1	
1,000-2,499	48	20	5.303	12	7	6	15	6	2
500-999	31	12	6.720	5	7	3	10	2	4
250-499	36	11	8.454	4	5	4	15	5	3
50-249	14	6	8.057	1	5	2	3	1	2
Less Than 50	0								
Total	211	80	5.298	36	61	35	53	15	11

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent differences calculated as the arithmetic mean of the percent differences disregarding the sign.

APPENDIX TABLE 9. - Error in 1980 Population Estimates Produced by
Zero Error Estimates of Group Quarters
Compared to Federal Census Data
State of Washington

(ZERO ERROR ESTIMATOR MODEL)

City Size by 1970 Population	Number of Cities	Number of Negative Differences [1]	Average Absolute Percent Error [2]	Percent Differences (Absolute Values) (1) Less Than 1.0	(2) 1.0-2.9	(3) 3.0-4.9	(4) 5.0-9.9	(5) 10.0-14.9	(6) 15.0 or More
100,000 or more	3	1	1.007	2	1				
50,000-99,999	2	0	4.887		1		1		
25,000-49,999	7	4	4.188	1	3	1	1	1	
10,000-24,999	22	11	4.148	3	7	3	8	1	
5,000-9,999	16	9	6.289	3	3	3	5	1	1
2,500-4,999	32	17	4.045	7	6	7	11	1	
1,000-2,499	48	22	6.043	6	10	8	14	8	2
500-999	31	13	7.366	1	8	4	9	5	4
250-499	36	8	9.126	1	8	5	6	9	7
50-249	14	6	7.265	1	3	3	3	2	2
Less Than 50	0								
Total	211	91	6.218	25	50	34	58	28	16

[1] The number of areas with estimates that fall below the 1980 federal census.
[2] Average percent difference calculated as the arithmetic mean of the percent differences disregarding the sign.